

Global Justice Information Sharing Initiative United States

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Information Quality

Program Guide

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INFORMATION QUALITY

Program Guide

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For recent versions of this guide and the tools it contains, refer to the Global Justice, Products and Publications, Global Privacy and Information Quality Working Group (GPIQWG), Products Web page on the Office of Justice Programs' Justice Information Sharing Web site,

www.it.ojp.gov.

For more information on information quality resources, refer to

www.it.ojp.gov/IQ_resources.

About Global

The U.S. Department of Justice's Global Justice Information Sharing Initiative (Global) serves as a Federal Advisory Committee to the U.S. Attorney General on critical justice information sharing initiatives. Global promotes standards-based electronic information exchange to provide justice and public safety communities with timely, accurate, complete, and accessible information in a secure and trusted environment. Global is administered by the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Assistance.

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Included in Appendix B of this Guide are two examples of information quality (IQ) attributes listings: Massachusetts Institute of Technology Information Quality (IQ) Dimensions and INFORMATION IMPACT International, Inc.'s Information Quality Characteristics. A special thank-you is extended to Richard Wang, Ph.D., Massachusetts Institute of Technology's Information Data Quality Program, and to Mr. Larry English. INFORMATION IMPACT International, Inc., for their kind permission to include these useful references within this Guide and, additionally, for their participation and assistance to GPIQWG throughout the development of GPIQWG IQ resources. Both listings are useful examples for an agency to reference when determining the applicable IQ attributes to be included in an agency's IQ program.

This Guide is a product of Global and its membership of justice practitioners and industry professionals. By their very nature, to be responsive to current justice information sharing issues, Global working group memberships are dynamic and dependent on the expertise required at any given time. Therefore, appreciation is expressed to GPIQWG, its members, member proxies, and subject-matter expert (SME) participants for developing and contributing to this document. During the crafting of this Guide, GPIQWG membership, proxy participants, and SMEs were as follows: Mr. Carl A. Wicklund, GPIQWG Chair American Probation and Parole Association

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FOREWORD

The Global Justice Information Sharing Initiative's (Global) Global Advisory Committee (GAC) serves as a Federal Advisory Committee to the U.S. Attorney General on critical justice information sharing initiatives. The GAC seeks to recommend to the Attorney General, the Assistant Attorney General, and the Office of Justice Programs, U.S. Department of Justice, measures to improve the administration of justice and to protect the public by promoting practices and technologies for the secure sharing of justice information as it relates to local, state, and tribal governments and their relationships to the federal government. Global has focused on privacy and information quality (IQ) as foundational issues that must be addressed by the justice community in order to support all information sharing activities.¹

The initial GPIQWG publication on the subject of information quality, *Information Quality: The Foundation for Justice Decision Making* (refer to Appendix A), highlights the fact that organizations which share information in a justice environment have a legal and ethical obligation to ensure the quality of that information. The current *Information Quality Program Guide* (Guide) is designed to assist justice managers in meeting these ethical and legal obligations in their management of the information they receive, collect, store, maintain, use, and share.

A. PURPOSE OF THIS GUIDE

This Guide is intended to help justice managers develop an information quality program for their organizations and is designed to support managers who must analyze their justice entity's information and determine what is needed to ensure good quality information. In support of that effort, the Guide features a step approach to the development and implementation of an agency-wide IQ program and includes a variety of resources and tools, as well as a framework for analyzing a justice entity's business rules for information quality.

IT IS NEVER TOO EARLY AND It Is Never Too Late to Think About

INFORMATION QUALITY

The information contained within this Guide will lead practitioners through:

- The establishment of IQ as an agency-wide program.
- The identification and analysis of agency justice events and products.
- + The application of IQ dimensions.
- The completion of an IQ assessment (using the Information Quality Self-Assessment Tool).
 - Implementation and follow-up (policies and procedures, education and training, and systematic monitoring, evaluation, review, and validation).

This Guide supports new system development as well as continuous assessment of existing organizational resources and practices. The discussion and tools presented here should inspire ongoing awareness of the need to address IQ issues and also motivate agencies to address the quality of the information for which they are responsible.

¹ GPIQWG is the lead Global working group on issues related to privacy and information quality. For more information and resource material related to these issues, refer to <u>www.it.ojp.gov/GPIQWG</u>.

The authors of this Guide recognize that organizations in the justice environment vary in size and resources. The authors also recognize that there are many ways to develop and implement an agency-wide information quality program. Further, an information quality program can be developed and implemented despite the lack of clearly identified resources allocated specifically for such programs.

For more information on information quality resources, refer to <u>www.it.ojp.gov/IQ</u> resources.

I. WHAT IS INFORMATION QUALITY (IQ)?

Gathering and providing access to inaccurate information is not a public service; in fact, it can be a public and personal injustice. Justice information of the highest quality is the cornerstone for sound agency decision making and inspires trust in the justice system and entities that use that information. Information quality is specifically enumerated as an issue to be considered in the *Fair Information Principles* (FIPs),² which assert that in order to be relevant and useful, information collected must be of high quality. This principle not only protects individuals, it is necessary for the proper and effective operation of the agency and minimizes waste and misuse of agency resources.

Information quality (IQ) is a multidimensional concept encompassing interdependent dimensions. The dimensions of accuracy, timeliness, completeness, and security are elemental to the concept of information quality.³ Information of high quality meets all of these dimensions, as well as other dimensions that satisfy the needs of those who will use the information. The collective evaluation, analysis, and management of these information dimensions and their critical relationships are required to ensure the creation of valid and reliable information that is necessary for good justice decision making. Fair Information Principle: Information Quality Principle

"PERSONALLY IDENTIFIABLE INFORMATION GATHERED SHOULD BE RELEVANT TO THE PURPOSE FOR WHICH IT WAS GATHERED, AND IT SHOULD BE ACCURATE, COMPLETE, MEANINGFUL, AND CURRENT."

For example, accurate suspect criminal history information has limited value if it is not secure and accessible when needed. Similarly, inaccurate and incomplete suspect criminal history information has limited value even when there is secure and timely access to it. The justice professional who relies on suspect criminal history information to make critical decisions must have confidence in his ability to access accurate information when needed.

Continuous examination of the quality dimensions of data, information, and records is part of an ongoing program of assessing data integrity and privacy concerns.⁴

² Organisation for Economic Co-operation and Development (OECD), *Fair Information Principles* (FIPs)—Basic Principles include Purpose Specification Principle, Collection Limitation Principle, Information Quality Principle, Use Limitation Principle, Security Safeguards Principle, Openness Principle, Individual Participation Principle, and Accountability Principle.

³ Section V of this Guide provides an extensive discussion of information quality dimensions that the authors categorize as either "core" or "contextual." The authors acknowledge that there is a range of views of the centrality of individual dimensions in this discussion. Refer to Appendix B for a presentation of two information quality models that informed the authors' deliberations.

⁴ Global Privacy and Civil Liberties Policy Development Guide and Implementation Templates, <u>www.it.ojp.gov/GPIQWG</u>.

A. DATA, INFORMATION, AND RECORDS⁵

This Guide can be applied to systems that contain data, information, and/or records. The distinctions among these entities are important to understanding the concept of information quality.

- Data provides facts, such as "date of birth," but no context for those facts. Data can be such items as the discrete elements in a database field or the dynamic components of a Web page.
- Information has meaning based on the context of its creation and use. For example, a customized report that summarizes arrest data for a particular jurisdiction from a database is information.
- Records are accessed, understood, and retained as evidence of a particular situation or event. Some examples of records are a case file, transcripts of a hearing, or data that is evidence of a transaction. The discrete elements of a record may not be physically located together in an organization's files or systems.

B. DATA QUALITY VERSUS INFORMATION QUALITY

"Data quality" may not always be viewed as synonymous with the term "information quality." For example, the data element "date of birth" may be correct, reflecting good data quality, but when that birth date is viewed in the context of other data elements in a particular group, it may communicate incorrect or unreliable information and, therefore, poor information quality. A correct birth date for "John T. Smith of Billings, Montana," if inadvertently linked to "John T. Smith of Boise, Idaho," may undermine the reliability of the information for the user when there are multiple John T. Smiths in the database. The inability to correctly link the John T. Smith of interest presents myriad issues, including insufficient assurance of correct identity.

However, for the purpose of this Guide, the terms "data quality" and "information quality" are used synonymously for following a quality improvement process.⁶

⁵ Minnesota Historical Society, State Archives Department, *Trustworthy Information Systems Handbook*, Section 3: What is a trustworthy information system? For more information about this project and a copy of the cited report, refer to the project Web site, www.mnhs.org/preserve/records/tis/tis.html.

⁶ Craig Fisher, Eifel Lauria, Shobha Chengalur-Smith, and Richard Wang, *Introduction to Information Quality*, "Data, Information, and Knowledge," p. 174.

II. WHY IS IQ IMPORTANT TO JUSTICE ENTITIES?

All participants in the justice process have a vested interest in collecting, entering, maintaining, using, and sharing good quality information to support and ensure the best possible decision making. The following are key points making the case for a justice entity ensuring information quality.

- Justice professionals rely on information to make decisions in the justice system that affect life, liberty, and property.
- In the current justice environment, with the increase in the use of technology and the crosscollaboration among local, state, tribal, and federal justice entities, data elements are shared to form the information and records that underlie decision making.
- The integration of data elements from multiple disparate sources imposes increased responsibility on individual contributors for the quality of their contributions. As such, contributing organizations should be sensitive to how their information will be used.
- Good information quality inspires trust in the justice system and in the law enforcement entities that rely upon this information.
- Good information quality enables agencies to perform their jobs efficiently and effectively and reduces risk and liability.
- Poor information quality generates distrust in the justice system, undermines the ability of the justice system to ensure just results, increases the risk of harm to all individuals, and raises potential liability for justice organizations.

 Poor information quality may subject the entity to risks that may adversely affect the agency. These risks range from the loss of life to legal liability and financial losses to the rapid erosion of citizen trust in the justice community.



Information about suspects, crime scenes, and other related justice data is rapidly created and often is quickly shared. In these data exchanges, the form and context of the central data element can change. The recording of inaccurate or incomplete incident reports or eye-witness statements may weaken or jeopardize successful prosecution. There are also multiple sources of poor IQ, including everyday information management challenges such as inadequate records management programs, incomplete records, out-of-date records, data entry mistakes, and access issues. These potential triggers for poor information may exist at any stage in the life cycle of the information and in any component or program.⁷

⁷ Refer to Section V for a detailed discussion of the information life cycle and application of this concept to the ongoing efforts required to ensure IQ.

The rapid creation of information and its quickly changing nature necessitate ongoing attention to improve the quality of justice entity information. Justice managers must understand that an IQ program helps to ensure on a continuous basis that information is timely, accurate, complete, and secure. Such a program will, in turn, reduce the risks to public safety, reduce legal liability of justice entities, and uphold justice entity reputation.

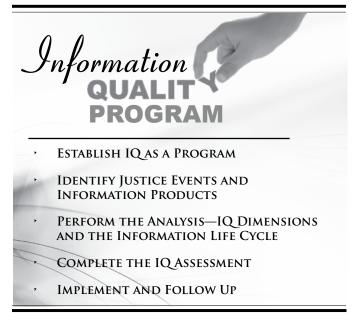
III. HOW DO JUSTICE ENTITIES ACHIEVE IQ?

A. ESTABLISH IQ AS A PROGRAM

Achieving high-quality information in justice information systems is the result of a strategic and intentional process. A vital element of consistent quality information is the existence of an ongoing program that manages and ensures stated organizational standards for quality. The authors of this Guide recommend that IQ be treated as an ongoing agency-wide program rather than a timelimited project. While a project is defined as a series of events and activities that has a beginning, middle, and an end, in contrast, a program is an ongoing effort to address business needs that are continuing and includes a series of ongoing activities designed to meet certain goals.

In justice entities, information continuously flows, technologies evolve, and information sharing efforts emerge daily. An IQ program is the only means to address this constantly shifting universe of tasks and events. A time-limited IQ project may yield momentary improvements, but the passage of time, the creation of new technologies, and an increase in information sharing necessitate the ongoing analysis and evaluation unique to programmatic efforts.

An IQ program ensures continuing accuracy, timeliness, and other critical dimensions of good information, as well as the implementation of information quality standards across multiple layers of organizational components, information, and practices. The program may be a new responsibility within existing organizational activities related to information management (e.g., a staff member receives some new job duties), or the program may be a newly created unit independent of existing efforts. The decision about where and how to place the IQ program will depend on the size and resources of the justice entity. Factors to consider when establishing an IQ program are size, resources, information quality, needs, and structure of information management initiatives



within the organization. Justice managers will need to define program guidance statements (vision and mission statements), governance, and other elements of the IQ program.

A critical step for any justice entity embarking on a program for information quality is to define clear, articulated organizational information quality standards for the nature and context of its information. These standards will serve as the business rules that underlie decisions about policies, procedures, and technologies used to manage the particular information created, received, and used during the course of regular organizational mission activities.

B. Elements of an IQ Program

An IQ program provides a management framework for a systematic effort to meet specific IQ assurance goals across multiple layers of organizational components and programs. Even with limited resources, justice entities may improve the quality of their information through implementation of IQ program elements. This section summarizes the program elements outlined in the remaining chapters of this Guide. Though the following elements are considered steps in a comprehensive IQ program, one requiring completion prior to proceeding to the next, it should be noted that all of these elements must be acknowledged and incorporated into the planning strategy at the formation of the IQ program. For example, although training may occur "after" new IQ policies and procedures are established, the entity will need to take into consideration the resources needed for agency-wide education at the beginning of the IQ program and factor this step into the planning process.

Operationally, the justice entity must engage in the following activities that are inclusive of key tasks working together to create an effective IQ program.

Elements of an IQ Program

1. THE PROGRAM CHAMPION: Sponsoring the Creation of An IQ Program

The responsibility for the quality of information ultimately rests with the justice entity's management and supervision agency executive. The agency head must endorse and treat IQ as a program. There must be a champion for information quality in the organization. It may be the head of the agency or organization, or it may be a high-level manager who has been assigned responsibility for ensuring that the organization meets appropriate information quality standards.

2. IQ GOVERNANCE STRUCTURE

The IQ governance structure clarifies the roles and responsibilities for an information quality program within the justice entity and the process for decision making. Often, when organizations begin to work on cross-functional projects that involve policy and technology, the issues of who has responsibility and authority to make decisions or allocate resources become an obstacle to action. A governance structure that lays out what persons or departments within a justice entity have responsibility and authority for IQ decisions will help to eliminate roadblocks when the justice entity must act to address IQ concerns. Common elements for a successful governance structure include:

- Inclusive Membership: The governance structure should include representatives with subject-matter knowledge of agency responsibility for IQ and policies and processes currently in place regarding information and the technologies in use. Representatives from disciplines such as information technology (IT), information architecture, project management, and records management and agency subjectmatter experts may be helpful as well.
- Purpose and Goals: Stakeholders should identify the purpose and goals of the IQ governance structure.
- Authority: The governance structure should identify the decision-making process, including identifying who has authority and responsibility to make decisions on IQ policy, IQ technologies, and IQ processes and procedures and how those decisions are made.
- Governance Charter: For the sake of clarity to justice entity personnel, it is important to document the IQ governance structure in a governance charter.

For more on governance and establishing roles and responsibilities for IQ program development and implementation, refer to Section 5: Governance, in Global's *Privacy and Civil Liberties Policy Development Guide and Implementation Templates* at <u>http://it.ojp.gov/documents/Privacy_Guide_Final.pdf</u>.

3. STRATEGIC PLANNING

Strategic planning, even when done at a minimal level, provides a focus for more efficient use of resources by identifying concrete goals and analyzing resource availability. Strategic planning allows individual justice entities to determine what must be done and what is possible. As with any entity-wide and programmatic effort, strategic planning will guide the institution to implement IQ as a justice entity program.

Strategic planning includes the development of guidance statements (vision, mission, and values statements) and the identification of clear goals and objectives.

- Vision—A compelling, conceptual image of the desired, successful outcome.
- Mission—A succinct, comprehensive statement of purpose of an agency, program, subprogram, or project that is consistent with the stated vision.

- Values—The core principles and philosophies that describe how an agency conducts itself in carrying out its mission.
- Goals—The desired long-term end results that, if accomplished, would mean the team has achieved its mission.
- Objectives—Specific and measurable targets for accomplishing goals that are usually shortterm with a targeted time frame.

For more on the planning process and the development of guidance statements, refer to Section 6: Planning, in Global's *Privacy and Civil Liberties Policy Development Guide and Implementation Templates* at <u>http://it.ojp.gov</u>/documents/Privacy_Guide_Final.pdf.

4. IDENTIFY JUSTICE EVENTS AND INFORMATION PRODUCTS

Prior to performing an assessment of the quality of the information the agency collects, receives, stores, accesses, shares, and disposes or destroys, the agency must first identify what justice events or products it manages or produces (refer to Section IV. Identify Justice Events and Information Products). This element of an IQ program is a prerequisite to performing an IQ assessment, since the agency must know what information it manages and produces in order to evaluate it. Furthermore, the entity must also research and determine what laws, regulations, and rules dictate information quality protections and procedures for the agency.

5. Perform the Analysis—IQ Dimensions and the Information Life Cycle

Once the justice entity has completed the task of identifying justice agency events and information products, the next step is to individually break down each justice event into the life cycle of that event to illustrate the flow of information from creation and receipt to maintenance, use, and disposition and destruction phases. The information life cycle is a simple framework for structuring this flow of information through a justice event and helps to organize the information, making it easier to apply core dimensions and to determine which contextual dimensions may apply to the justice event information.

As this Guide has outlined, the concept of IQ encompasses core dimensions, such as accuracy, timeliness, completeness, and security. Once the entity has identified its justice information products and broken an event down into the phases and components of an information life cycle, it will be necessary for the agency to determine what IQ dimensions (or business rules) the agency wants to apply and uphold for its information. Using standard core IQ dimensions along with agency-defined contextual IQ dimensions that are appropriate to each particular justice event or product will result in a foundation of business rules that will solidify agency IQ objectives and improve the quality of decisions that are based on that information.

6. COMPLETE THE IQ ASSESSMENT

Once the flow of information in a justice event is organized into an information life cycle and contextual dimensions are identified, the entity will perform an IQ assessment, applying both the standard core dimensions and the identified applicable contextual dimensions to reveal any gaps in roles and responsibilities, policies and procedures, and information technology that may risk the quality of the information. Assessing the quality of the information in each agency justice event will result in an IQ baseline for that information which the entity can use as a benchmark or a starting point for improvement.

7. PROGRAM GOALS—POLICIES AND PROCEDURES

The justice entity must define the goals of the agency-wide IQ program consistent with the business rules and its analysis of the current status of information quality in the organization. The IQ assessment may expose gaps or areas that require improvement in information quality. Since the assessment will determine the baseline level of quality for each justice event, the entity will need to then establish or revise policies and procedures to ensure the agency meets or improves upon that level of quality. This task not only involves policies and procedures but can also include the application or upgrade of technology.

Program goals that are developed as a result of the IQ assessment may include integration of IQ requirements into information technology processes, integration of IQ requirements into business systems and processes, and information sharing policies.

8. EDUCATION AND TRAINING

Fostering agency-wide IQ awareness and ensuring that IQ practices are embedded into the organizational culture will require education and training. Employees and information users, within and outside the agency, will need to be informed of the importance of IQ and trained in areas specific to their roles and responsibilities on day-to-day actions they must take in order to improve IQ.

9. Systematic Monitoring, Evaluation, Review, and Validation

As described earlier, an IQ program is an ongoing activity that will require evaluation, monitoring, and enhancement to ensure that business rules are up to date and actively implemented throughout the organization and that program goals are being met.

Though these final elements (7 through 9) may appear, chronologically, as final tasks of an IQ program, it is important to realize that these must be considered a priority from the beginning—before the program is implemented.

IV. IDENTIFY JUSTICE EVENTS AND INFORMATION PRODUCTS

A. JUSTICE EVENTS AND PROCESSES

Once justice managers decide to initiate an IQ program and identify the individual or individuals responsible for its implementation, the next step must be to identify the justice events and associated information products used and produced by the entity. A complete understanding of the justice information the agency creates and receives is the foundation upon which an information quality program is built. For example, law enforcement agencies initiate information at creation and capture when responding to an incident and making an arrest (i.e., incident and arrest reports).

Creating a list of the information generated by the business processes within the organization is a good starting point for an agency to understand what information the agency creates, captures, stores, maintains, uses, shares, and disposes of or destroys. These may be incident reports, presentencing reports, litigation case files, investigative files, disposition reports, or criminal history reports. This breadth of knowledge on the creation, receipt, management, use, and disposition or destruction of information is critical in order for the assessment of the quality of that information to be performed.

As part of this task, the justice entity should:

- Identify what justice processes or events occur within the justice entity (e.g., investigations).
- Determine what information is generated by those events (e.g., an incident report)—a complete listing of the types of information products the agency generates.



The analysis should solicit information related to:

- The types of information created, collected, or received in the organization.
- The purpose for and use of the information both internally and externally.
- The organizational business processes for creating, managing, using, and disposing of the information.
- Identification of those who create or capture, maintain, use, or dispose of or destroy that information.
- Any legal requirements related to the information.

B. LEGAL ANALYSIS

Along with the identification of agency justice events and products, the organization must also perform a legal analysis to determine what laws, regulations, and rules are in place that inform agency information quality business rules and that dictate IQ protections and procedures. Agencies must uncover what their local and state laws, regulations, and rules say about information quality, as well as determine what are the risks and liability of storing and sharing information of poor quality.

For more information on performing a legal analysis, refer to Section 7.2.4: Performing the Legal Analysis, in Global's *Privacy and Civil Liberties Policy Development Guide and Implementation Templates* at http://it.ojp.gov/documents/Privacy_Guide_Final.pdf. Though the analysis described in this reference is for performing a legal analysis for privacy laws, it serves as one example of how to approach a legal analysis.

V. ANALYSIS—IQ DIMENSIONS AND THE INFORMATION LIFE CYCLE

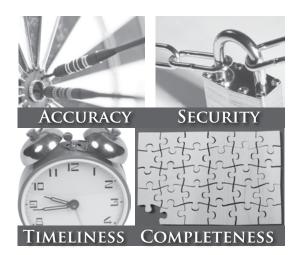
Every single day, individuals working for justice agencies make critical decisions that affect their own lives, those with whom they work, and those they are sworn to serve. These decisions are only as good as the information upon which they are based. This is why a justice entity must thoughtfully analyze the information for which it is responsible, in the context of its related roles and responsibilities in the information life cycle, as part of the IQ program in order to ensure and defend its quality.

This section is designed to:

- Educate readers on the concept of core and contextual IQ dimensions.
- Provide a framework for agencies to chart the flow of information through a justice event.
- Provide guidance on how to identify IQ dimensions that are applicable within each component of each phase of the life cycle of the justice event.

The product of this exercise will be a list of IQ dimensions that will be addressed by a combination of roles and responsibilities, policies and procedures, and technologies for each justice information product (e.g., an incident report, a presentencing report, case management information) generated and used by the justice entity.

In Section IV. Identify Justice Events and Information Products, justice agencies are guided to develop a list of the agency's typical justice events or processes and what information products are generated by those justice events (e.g., incident report). Next, the justice entity will need to break down a justice event into the flow of information at each phase (creation and capture, maintenance, use, and disposition and destruction) and at each component of each phase. In completing this task, the justice entity will more readily be able to identify the IQ dimensions relevant to the information in the justice event. Developing a list of all information



quality dimensions that affect each point in the flow of information lays the groundwork for the agency's initial IQ evaluation—the IQ assessment. The IQ assessment (refer to Section VI. Complete the IQ Assessment) will uncover whether all IQ dimensions the agency identified are being addressed.

To begin this process, the following information has been provided to further an understanding of what is meant by IQ dimensions. Agency selection of IQ dimensions relevant to an agency justice event is discussed later in this section in C. Identifying Contextual IQ Dimensions Applicable to a Justice Event.

A. OVERVIEW OF INFORMATION QUALITY DIMENSIONS

As discussed in the Foreword to this Guide, there is no definitive set of information quality dimensions that applies to all justice information in all contexts. However, information quality can encompass IQ dimensions that are interdependent, such as accuracy, timeliness, completeness, and security. A justice entity's determination of its particular critical IQ dimensions should include consideration of the context of justice information use in the organization, the nature of the information, its purpose for the process, and its uses for outside consumers.

Certain IQ dimensions have customarily been considered essential (or core) dimensions of justice information. Additional IQ dimensions (more contextual in nature) may be necessary to ensure the quality of that information in any particular justice agency.

1. TRADITIONAL DIMENSIONS OF JUSTICE IQ

Traditionally, justice entities have focused on the dimensions of accuracy, timeliness, and completeness as the primary dimensions that ensure information quality. These traditional elements of information quality can apply to any set of data that is created or received, maintained, used, and disseminated by justice entities.

- Accuracy—Accurate information is free of error. Accuracy, however, may have more than one meaning, depending upon the context in which information is captured.
- Timeliness—Timely information is information that is available to users when they need it and is up to date at the time it is being used.
- Completeness—Complete information is information that is thorough and inclusive, not a "partial picture," for the decision-making or proposed business purpose.

One example of the application of these dimensions in the justice environment is criminal history record information. The quality of the information contained in criminal history record repositories is typically assessed along its levels of accuracy, timeliness, and completeness. For example, a criminal history record may contain multiple social security numbers. Clearly, no more than one can be the correct social security number. Yet if each number is a true recording of the social security number given by the accused at the time of arrest, then the criminal history record is considered to be accurate. Similarly, a criminal history record may contain 50 or more names that have been used by the subject of the record, although none of these names may be the subject's birth or legal name.

In today's common justice information sharing environments, these three traditionally accepted, or core, elements of quality information are often augmented by additional dimensions of information quality that can be equally critical to effective justice decision making.

2. CORE DIMENSIONS OF IQ

As discussed, the minimum standards for good quality information in any justice entity are traditionally understood as the three traditional dimensions of accuracy, timeliness, and completeness. However, these three dimensions may not fully define the justice entity's business rules or processes in the effort to ensure good information quality. The authors of this Guide have identified "security" as a critical fourth core dimension that must apply to all quality information due to its role in ensuring the other three dimensions. Although the level of security may differ depending on the nature of the information, there is almost no circumstance in which justice information has no security requirement. The inclusion of security completes a set of baseline-or core-dimensions that should be applied to any justice event information, with additional elements considered, as appropriate, as contextual dimensions.

In summary, the following core dimensions are, therefore, recommended as the minimum standards that should be used to evaluate the quality of the information in any selected justice event.

- Accuracy (free of error)
- + Timeliness (available when needed)
- Completeness (appropriate amount of information)
- Security (access limitations in place and information integrity maintained)

3. CONTEXTUAL DIMENSIONS OF IQ

In addition to core dimensions, justice information may have other requirements that must be met in order to ensure its quality. These dimensions are termed "contextual" because they depend upon the context in which the information is created, maintained, used, shared, and disposed of by the justice entity and its communicating partners.

The following is a brief list of contextual dimensions that an agency may select from to add to the standard core dimensions when evaluating the quality of the information handled in the justice event. For more information on how to determine which contextual dimensions may apply, refer to C. Identifying Contextual IQ Dimensions Applicable to a Justice Event, within this section. For more extensive lists of additional contextual dimensions, refer to Appendix B.

- ✦ Accessibility
- Interpretability
- Relevancy
- Objectivity
- Concise representation
- Ease of manipulation and applicability to different tasks/usability
- Verifiability (intelligence)
- Reputation
- Understandability
- Value-added

Below are definitions of a few of the contextual dimensions listed above that agencies may consider for their own information quality program purposes. For more contextual dimensions and their definitions, refer to Appendix B.

Accessibility—The extent to which information is available and quickly retrievable. Within the justice community, this means that information is available in a format that is easily accessible when the practitioner needs the information to make important decisions—for example, how to handle a suspect or what the appropriate response to an incident should be.

Interpretability—The extent to which the information is represented consistently in words that are commonly understood (common lexicon) by all members of the justice community. The vocabulary of a particular language or field (for example, common coding of form fields). Within the justice community, this means that information that is shared among justice system partners is both understood and means the same thing to all users.

Relevancy—The extent to which the information is applicable and helpful for the task at hand. Within the justice community, this means that the information is created, maintained, used, and disseminated only for the relevant purpose for which it is required to complete the justice task at hand.

Objectivity—The extent to which the information is free from the biases or opinions of the person creating the information. Within the justice community, this means information that is collected and entered into a justice information system is based on factual events or otherwise impartial sources.

These are just a subset of possible contextual dimensions of information quality that may or may not apply to an agency's information. The contextual examples described here provide a

basic understanding of the process for selecting dimensions that may apply to the agency's particular justice event. When the work begins of identifying contextual dimensions that specifically apply to an agency's information, those involved should review all of the dimensions that are listed in Appendix B.

Once the justice entity has completed the task of identifying agency justice events and information products, the next step is to select one of these justice events or products and break it down into the life cycle of that event to illustrate the flow of information from the creation and receipt phase to the maintenance phase, to the use phase and, finally, to the disposition and destruction phase in order to acknowledge the roles and responsibilities, policies and procedures, and information technology components of each of those phases.

B. INFORMATION LIFE CYCLE

The information life cycle is a simple framework for illustrating the flow of information through a justice event that helps to organize the information for the assessment. The authors of this Guide recommend selecting one justice event at a time to chart in the information life cycle since this will make it easier to apply core dimensions and to determine which contextual dimensions may apply to the justice event information. Performing this analysis will assist the agency in preparing for the IQ assessment. Completing this task will produce a table or chart that enables the person(s) performing the IQ assessment to illustrate each point in the information flow at which information may be at risk for quality deficiencies. The information life cycle includes creation and receipt, maintenance, use, and disposition phases. Additionally, this framework will identify roles and responsibilities, where the organization applies policies and procedures, and the use of technologies that implement those policies and procedures, throughout the useful life of the information.

Justice Event or Process:					
	Components of Each Phase				
Life Cycle Phases	Roles and Responsibilities	Policies and Procedures	Information Technology		
Creation and Receipt					
Maintenance					
Use					
Disposition					

FIGURE 1: INFORMATION LIFE CYCLE

1. PHASES OF AN INFORMATION LIFE CYCLE

For the purposes of justice information, there are four primary phases in the information life cycle:

- Creation and Receipt
- Maintenance
- + Use
- Disposition

The following are general definitions for each of the phases of an information life cycle:

- Creation and Receipt—At the point of origin of a record or set of information, the justice entity takes on responsibility for the quality of the information. This may occur when personnel create an original document or when the agency receives information, documents, or data for the first time from another organization, either manually or electronically. Responsibility for information quality, even the singular prevention of the alteration of a document or data, begins at creation or receipt by the justice entity.
- Maintenance—The maintenance stage of the information life cycle describes that period when data is being maintained or when information is being added to the data for current or future use by single or multiple individuals and may require security and privacy protections. This stage also includes the maintenance of the information when it is no longer in active use but is not yet ready for archiving, purging, or disposal.
- Use—During the use phase of the information life cycle, information is actively used for a justice entity purpose. This stage of the life cycle may include continuing information exchanges both within and outside the agency and use by multiple staff. This phase may also require security and privacy protections.
- Disposition—When information is purged or disposed of, the justice entity either destroys, archives, or seals the record at the end of its retention period. This phase is initiated when the agency is finished with the record or it has reached a regulated or mandated retention period. The completion of this phase is indicated when a record or information is permanently removed from the agency files or database(s). This term should not be confused with the term "disposition" as used to describe the final decision on a legal case or matter.

Retention periods are organization-specific and based on research of the regulatory, statutory, and legal requirements for management of information for the justice entity and knowledge of the business processes and programs for which the information is used. The organization may consider the potential historic, intrinsic, or enduring value of the information and include that in its determination of the retention period. When the information has met all of these needs and is no longer considered to be valuable to the organization, it should then be disposed of by means appropriate for the content.

2. COMPONENTS OF INFORMATION LIFE CYCLE PHASES

Within each of the phases of the information life cycle, there are three primary components that make up each phase. These are roles and responsibilities, policies and procedures, and information technology. Information quality has the potential for being affected, as well as improved, at each of these components.

Roles and Responsibilities

As the team undertakes its analysis of the justice information in its organization, it must consider and identify the roles and responsibilities of those within and outside the organization who handle the information as part of that analysis. Once the justice entity has identified its justice events, the consideration of roles at each point along the information's handling throughout each identified event is critical to a beneficial IQ program.

Three different roles are described below, and each role and responsibility may affect the applicability of the IQ dimensions. Note that within a justice agency, there will, most likely, be more than one person functioning in each of these roles. It also is important to keep in mind that an approval process may also be a responsibility component contained in each role. The individual working in each of the different roles may be required to have his or her work approved before it is moved into the other stages of the life cycle.

• Role 1: Data Originator—The data originator (creator, collector, capturer, contributor) is the person responsible for initially collecting the data. This may be the collection of information for a presentencing investigation. Another example may be a police officer who has to respond to and handle a complaint. In addition to taking whatever action is appropriate to the circumstances (e.g., arrest, referral), the police officer's responsibility is to collect all relevant facts about the incident consistent in form and format as prescribed by the officer's department and other authorities. For example, in several states, the complaint or incident report has been standardized so that the information record supports an array of activities, such as initiation of investigation, transmittal of alarms for identifiable stolen property, crime analysis, inclusion in the state program for recording information in the National Incident-Based Reporting System (NIBRS) and/or Uniform Crime Report (UCR) program, etc. The same applies to other justice professionals who are responsible for handling incidents, complaints, presentence investigations, court disposition information, or other calls for service. All of this information must not only be collected but then properly entered into an electronic records system. Data entry, especially with the proliferation of laptop computers and other automated recording devices, may fall to the data originator or a support person responsible for data entry. In many justice agencies, more than one person may function as a data originator-one who receives information and another to take that information and enter it into the automated system.

- Role 2: Data Custodian—The data custodian ensures that data is stored and maintained properly. It is this person's responsibility to ensure that the integrity of the information is protected within the data storage system. The data custodian is the person who maintains the data and ensures that disaster recovery is possible in the event of a system crash or other catastrophic event.
- Role 3: Data Consumer—The data consumer is the person who uses the information. In the justice community, it can be the police officer, probation officer, state or district attorney, or judicial officer—any individual who is in a decision-making role and needs to use the information for making decisions. Alternatively, justice community practitioners rely on information to carry out their responsibilities. For example, for the detective, the incident report is the vehicle for initiating an investigation.

Policies and Procedures

Another component of each phase of the information life cycle is the identification, development, or revision of justice entity policies and procedures. Policies and procedures should be identified, developed, or revised to help guide those in roles that directly affect the quality of the information or those tasked with the responsibility for ensuring or improving the quality of the agency's information.

The following should be considered in an agency's policy development:

- Ensuring that the agency's privacy policies are embedded within information quality policies. Specifically, the collection, use, and dissemination of information should be considered when adopting policy. How are these steps handled?
- How a document is received, as well as how and where it is maintained.
- The agency's disposition of the information, keeping in mind that in many cases, laws may govern the disposition of the information.
- Including retention statements in policy that are in line with the best practices for the information they are disposing of or that parallel the laws governing retention and disposition.

For more information on policy guidelines, refer to Section VII, Implement and Follow Up, A. Policies and Procedures, and Appendix C, Ten Policy Guidelines to Consider.

Information Technology

The use of technology is the third component of information life cycle phases. What technology is currently used, needs updating, or requires implementation to help improve information quality during the collection or receipt of data, at data usage, during maintenance, and at archival or disposition of information? These are vital considerations for an information technology system. For example, providing a drop-down menu within a data field that forces the inclusion of certain information before the data entry specialist can move on to the next data field may be important. Systems that create audit logs are other examples of technology solutions that can be implemented to help ensure quality. Refer to Figure 2: Applying Accuracy to the Information

Life Cycle of an Incident Report for illustrations of the use of technology within the life cycle phases.

C. IDENTIFYING CONTEXTUAL IQ DIMENSIONS APPLICABLE TO A JUSTICE EVENT

Once the flow of information in a justice event is illustrated in an information life cycle chart, with the roles and responsibilities, policies and procedures, and information technology identified within each phase of the justice event (creation and capture, maintenance, use, disposition), the next step is to determine which contextual dimensions (in addition to the standard core dimensions) will apply to the justice event. Core IQ dimensions apply in all circumstances, whereas choosing which contextual dimensions that apply is contingent upon what the information is, who creates it, who uses the information, and for what purpose the information was created and used. For example, although the core dimensions accuracy, timeliness, completeness, and security apply to both incident and arrest reports, different contextual dimensions will apply to each kind of report. Identifying the contextual dimensions that are applicable to each component of each phase will lay the foundation for the information quality assessment discussed in Section VI. Complete the IQ Assessment.

The identification of contextual dimensions can be accomplished by a series of questions and answers about the justice event and the information illustrated in the information life cycle. This section provides questions any agency may want to ask as part of its contextual IQ dimension identification process. Note that this is not an exhaustive list but a starting point for this process. The agency should review the information that is illustrated in each component (of each phase) of the information life cycle as it considers how information quality may be affected or improved when asking these questions. Refer to Appendix B for a listing of additional IQ dimensions from which an agency may select contextual dimensions applicable to a justice event.

Who creates the information and who receives the information?

A consideration of who is responsible for creating and receiving the information and at what point in the flow of information (creation/ capture, maintenance, use, disposition/ destruction) will help determine which contextual dimensions apply to an agency's justice event information. For example, when a law enforcement officer creates information that is then entered into an agency's records management system, it is critical that the information be entered in an "interpretable" form by the person responsible for inputting the information. Use of slang, acronyms, or uncommon terms undermines the understandability of the information and, potentially, its usefulness. Use of such language also creates inefficiencies and possible inaccuracies by requiring the person adding to or using the information later in the process to inquire about the meaning of the information and potentially ascribe an incorrect meaning to the information or taking inappropriate action based on the information.

What is the purpose(s) for which the information was created?

The purpose for which the information was created has an effect on the information quality dimensions that apply to it. For example, the contextual dimension "appropriate amount of data" would be more important for incident reports than for arrest reports because of the different purposes of the reports. Incident reports are intended to be a comprehensive description of all known information that could possibly be relevant to an investigation. In contrast, arrest reports typically contain a more limited but fixed set of information that aids in the processing of the case. Arrest information that is submitted to a state's criminal history repository also contains a precise set of limited information that is used for generating rap sheets and allows other justice system partners to obtain a basic understanding of an individual's alleged criminal history.

+ Are core dimensions enough?

For each component, consider whether the application of core dimensions is enough to ensure trust in the justice system, reduce risks and liabilities, and enhance job performance? For example, one contextual dimension of the justice process, from arrest to adjudication, is "objectivity"—the use of information that is free from any biases or subjective observations. In some cases, however, personal opinions have a place in particular justice processes (e.g., witness accounts that aid in the investigation of an incident or an individual or recommendations as part of a presentence report). This example clearly illustrates the necessity of applying a particular contextual dimension— "objectivity"—for certain justice events, versus not applying it to other justice events.

An incomplete understanding of all the dimensions that apply to an agency's information undermines the trust that is placed in the justice system. Refer to A. Overview of Information Quality Dimensions within this section and to Appendix B for a listing of additional IQ dimensions to gain a better understanding of core and contextual IQ dimensions.

For each information quality dimension ("core" and "contextual"), the following questions can be asked:

- Is this dimension important to the information and how it will be used?
- Is this dimension critical to the effectiveness and reputation of the justice entity?
- Will failure to implement this dimension result in undermining trust in the system or compromising the user's ability to do his or her job effectively and efficiently?

- Will failure to implement this dimension place the justice entity at risk for public embarrassment or litigation?
- How do the dimensions identified apply? What does the justice entity do with the dimensions identified?
- Is there a limited period of use (timeliness)? How long is the information needed for business purposes?
- 1. EXAMPLE: APPLYING THE ACCURACY DIMENSION TO THE INFORMATION LIFE CYCLE OF AN INCIDENT REPORT

The following is a simplified example that demonstrates how to apply an IQ dimension, the core IQ dimension "accuracy," to roles and responsibilities, policies and procedures, and technologies in the information life cycle of an incident report.

Justi	ce Event or Process:		Incident Report	
	mation Quality Insion:		Accuracy	
		Components of Each Phase		
		Roles and Responsibilities	Policies and Procedures	Information Technology
Cycle Phases ⁸	Creation and Receipt	 Data collector Data custodian Data consumer Managers that use available tools and policies to ensure data entry is accurate 	 Policies that require training on data entry Policies that audit to determine accuracy throughout the life cycle Measurement of reliability of accuracy 	 Data entry technologies that promote accuracy (e.g., drop-down boxes) Technologies that audit for accuracy at entry of data Web-based training
	Maintenance	Data managers that are familiar with policies	Policies that limit authority to change entered information	Technologies that maintain audit log of all changes to information
Life	Use	Data consumer	Policies that limit access and dissemination	Credentialed role-based access
	Disposition	Managers and data entry staff provide sufficient information to link the record to a retention schedule	 Information identified sufficiently to ensure correct information is disposed of Establish policies for incident report retention schedules 	Technologies that enforce policies, such as an automated function to destroy incident report data according to established retention schedules

FIGURE 2: APPLYING ACCURACY TO THE INFORMATION LIFE CYCLE OF AN INCIDENT REPORT

8 For definitions of the phases of the information life cycle, refer to Section V. Analysis—IQ Dimensions and the Information Life Cycle, B. Information Life Cycle, 1. Phases of an Information Life Cycle. Justice system incident reports (related to alleged criminal behavior) are created and shared in many circumstances. Ensuring the quality of the incident report is critical to sustaining its value in the law enforcement setting. To determine the IQ dimensions that become the business rules (or standards) for a justice entity reviewing its responsibilities related to an incident report, many questions will need to be answered. At each phase of the information life cycle, the IQ program should assess the risks, determine the goals, and define the roles (e.g., data originator, data custodian, and data consumer) and responsibilities.

D. FOUNDATION OF THE IQ ASSESSMENT

Through the agency's organization of the flow of information in a justice event in the information life cycle and its identification of contextual dimensions that apply, the agency has now established the foundation for completing the IQ assessment—a critical next step that assesses, measures, uncovers gaps, establishes a baseline, and provides direction for improving information quality in order to improve agency decision making, enable efficiency and effectiveness, reduce risk and liability, and further trust in the justice system. To learn more about the IQ assessment, refer to Section VI. Complete the IQ Assessment.

VI. COMPLETE THE IQ ASSESSMENT

An IQ assessment is a fundamental undertaking of an overall IQ program and should be completed for each of the agency-identified justice events and information products (refer to Section IV. Identify Justice Events and Information Products) in order to assist the justice entity in obtaining a realistic status of the quality of the agency's information.

An IQ assessment, whether conducted using the tool provided herein or using a different tool, should provide a practical mechanism for assessing, measuring, and improving information quality in order to fulfill the agency's IQ program goals of enhancing agency decision making, enabling efficiency and effectiveness, reducing risk and liability, and furthering trust in the justice system. GPIQWG has developed and made available the *Information Quality Self-Assessment Tool* (the "Tool"), contained in Appendix E, for use in the IQ assessment.

A. INFORMATION QUALITY SELF-ASSESSMENT TOOL

A mandatory step for any agency in developing an IQ program is the completion of an information quality self-assessment—an indepth evaluation of agency information and reports associated with justice events.

The Tool is designed to be used as part of an ongoing IQ program and will allow practitioners to:



 Identify the information points or phases of an agency's selected justice event (creation and receipt, maintenance, use, and disposition) and the roles associated with each phase.

- Illustrate the roles and responsibilities, policies and procedures, and information technology associated with each life cycle phase.
- Determine which IQ dimensions, in addition to core IQ dimensions, are applicable for each point along the justice event's information continuum.
- Uncover gaps that beget information quality problems.
- + Implement information quality in practice.
- Enhance overall understanding of the effects that an agency's business processes—related to information collection, maintenance, management, dissemination, and disposition have on information quality.

The Tool is presented in a matrix format with sample self-assessment questions provided within a process framework. The Tool is designed to be agency-tailored to unique agency-specific processes. The series of questions provided are generic and can be customized to a broad range of justice events. These serve as a starting point from which the agency can craft additional relevant IQ questions and apply other relevant IQ contextual dimensions to help the agency create an IQ baseline, or "as is" state of the entity's information, for each justice event undergoing an IQ evaluation. Additional results from the assessment include benchmarks for evaluation, tracking for improvement, and a mechanism for accountability.

Figure 3 is an excerpt from the Tool illustrating how the user will be answering a structured series of questions about the selected justice event (for example, an incident report). The Tool's assessment is broad enough to examine the roles and responsibilities, policies and procedures, and information technology choices that affect information quality. Refer to Appendix E for the *Information Quality Self-Assessment Tool*.

The following are broader questions the agency may consider when performing an IQ assessment and during the development of a plan to improve the quality of justice event information:

- Where is the information located (including mobile devices and storage media)? Where should it be located in the future?
- What current policies and procedures dictate how that information is handled? Should those policies be updated or altered?
- Who is handling the information and are they in compliance with existing policies? Would awareness, training, and education efforts increase compliance?

- What technology is in place that creates, stores, uses, shares, or disposes of the information?
 What IT tools can enable better IQ?
- In the absence of technology, what manual processes are in place that create, store, use, share, and dispose of the information?
- How can the entity's records management program enhance IQ?

Agency Name: _____ Person Completing Assess Date: Title: Type of Data Assessed: Where applicable, answer assessment question each of the four phases of the information life and for each component within each phase ion life cycle Assessment Questions **Confidence Level** Priority Status Remarks/Note Components Life Cycle Phases Withir Within Roles and Responsibilities Within Policies and Procedures CORE DIMENSION: AC OY ON ON/A Do you validate the information collected? Low Medium High N/A Complete In Process Not Begun N/A Creation/Receipt Maintenance Low Medium High Complete In Process Not Begun N/A Low Medium High Complete In Process Not Begun N/A Use Low Medium High Complete In Process Not Begun N/A Disposition Do you have a mechanism to ensure that required fields are completed? Low Medium High Complete In Process Not Begun N/A Creation/Receipt DY DN DN/A Maintenance Low Mediur High Complete In Process Not Begun N/A Low Mediu High Use Complete In Process Not Begun N/A Disposition Low Mediu High Complete In Process Not Begun N/A

FIGURE 3: INFORMATION QUALITY SELF-ASSESSMENT TOOL MATRIX

VII. IMPLEMENT AND FOLLOW UP

A. POLICIES AND PROCEDURES

Since the assessment will determine the baseline level of quality for each justice event, the entity will need to then establish or revise policies and procedures to ensure the agency meets or improves upon that level of quality. Policies and procedures consistent with IQ requirements are a critical element in any information quality program. The entity must treat information as a <u>product</u> and not a <u>by-product</u> of its work. After all, the information that a justice entity collects and uses is at the heart of how officials administer justice to ultimately protect the public and the nation.

The IQ assessment, described in the previous section, should have identified gaps and policy needs. In addition to revising or developing policies and procedures specifically related to IQ requirements, the entity should examine other organizational policies that may have an ancillary effect on IQ. Policies to review include, but are not limited to, information technology (IT) security, privacy, retention, and disposition, as well as acceptable use policies.

Program goals that are developed as a result of the IQ assessment may include integration of IQ requirements into IT processes, integration of IQ requirements into business systems and processes, and information sharing policies.

Integration of IQ Requirements Into Information Technology (IT) Processes

Depending upon an agency's IQ goals and program, this may require alterations to existing IT systems and processes as well as the use of new IT tools to accomplish improved IQ. For example, solutions are available to "clean up" existing databases in order to correct and standardize information as well as delete information that is no longer needed. It is



important to note that these data-cleansing activities should take place on a regular basis as determined by the IQ program so that outdated or incorrect information is identified as quickly as possible. Data integration solutions can focus on merging or linking information from a variety of sources, while data enrichment solutions can enhance information with additional information from other sources.

Integration of IQ Requirements Into Business Systems and Processes

Although technology is a useful tool to enable improved IQ, business systems and processes and procedures must be reengineered to conform to the new way the agency will address IQ. This may alter job descriptions and responsibilities of some employees. It may also change how and when information flows through an agency and could also impact its sharing with other organizations.

+ Information Sharing Policies

Participating agencies and entities should preemptively address privacy and information quality issues by entering into memoranda of understanding (MOUs) that clearly set forth each respective agency's obligations. MOUs set forth a framework for review and coordination of policy initiatives and guidelines that agencies will abide by when working together to achieve a common goal. Such memoranda typically address, among other issues, costs associated with participation and how agencies will resolve unanticipated disputes and information quality issues. In order to ensure information quality, the MOU should:

- Establish "ownership of information," identifying who is responsible for the quality of the information collected, stored, and shared.
- Establish a formal process to identify, report, and correct errors.
- Address interagency notification (e.g., local agencies need to notify the system administrator concerning issues of data quality).
- Require that the system administering agency and participating agencies identify an individual to serve as a point of contact for information quality issues.
- Include a requirement for periodic audits of data.
- Require that the administering agency and participating agencies have a secure connection for the transmission of data.
- Establish a formal process to evaluate whether data quality issues require notification to the owning agency or the individual the information refers to and, if so, the criteria for determining when notification is appropriate.
- Outline the shared responsibilities for costs associated with notification.
- Specify the manner and form of notice.
- Identify the content of the notice.

B. EDUCATION AND TRAINING

Education and training are essential elements of a good IQ program. Employees must be aware of the need for information quality and the mechanisms by which the agency meets its information quality requirements. Employees should be educated about the importance of IQ; trained in areas specific to their responsibilities for the information they create, use, or manage; and informed of agency-established information quality policies, as well as related privacy and civil liberties policies,⁹ that may be impacted by poor information quality.

A training plan should articulate objectives and the purpose of the training, the selected approach to training to achieve those objectives, and the follow-up and measurement of the success of the training. Being specific as to these pieces will ensure that the training goals can be achieved.

Taking into consideration the size of the justice entity, available resources, existing training programs, and the nature of the training to be undertaken, the following areas should be addressed in a training plan:

- Trainees—Determine what personnel should be required to participate in training regarding the implementation of and adherence to the IQ program. At a minimum, consider trainees from the following groups: senior management, information technology staff, new employees, current employees who enter or update information or who perform processes that are impacted by information quality policies, and those individuals that use the information in their day-to-day jobs.
- Content—Determine what should be covered by the training program. Training should address at least three broad areas:
 - The purpose of the information quality program, the substance of the information quality policies and procedures, the importance of quality information to the entity's mission and responsibility, the impact of poor information quality, and possible penalties for infractions or violations.

⁹ Global Privacy and Civil Liberties Policy Development Guide and Implementation Templates, <u>http://it.ojp.gov/documents/Privacy_Guide</u>_Final.pdf.

- How to implement the information quality program in the day-to-day work of the user, whether a paper or systems user.
- Performance measurement should be a part of the training and incorporated into the content. Measurement of training success may be part of the overall method of measuring the success of the IQ program.
- Method—Different approaches to training include lecture courses, distance learning, computer-based training, train-the-trainer courses, and course modules added to existing training programs (for example, added to the training on the agency's privacy policy). The content and target audience will provide direction for the most effective and appropriate methods of training.
- Frequency—There is no question that along with the initial training plan, there should be periodic training updates, refresher materials, and training provided.
- Additional Resources—Consider whether additional resources might assist the users as they begin to implement the information quality policies and procedures of the IQ program. Appendix A contains two primers on information quality and the information quality program that may be useful—Information Quality: The Foundation for Justice Decision Making and 9 Elements of an Information Quality Program. The agency may also wish to develop jobspecific resources, such as a checklist of steps to follow for certain job functions that could be used at the desktop, a Web site with frequently asked questions (FAQs), or a Help Desk to assist employees.
- Acknowledgment—Consider whether there should be some active acknowledgment that the information quality policies and procedures, as well as training on these, were received and reviewed within the agency, such as a signed statement acknowledging receipt and compliance.

Education and training are a continuous process that should be tailored to a justice entity's mission and available resources.

C. Systematic Monitoring, Evaluation, Review, and Validation

Any organizational program requires evaluation and monitoring in order to ensure that program goals are met. Continuous monitoring in the form of automated IQ tools, audits of compliance with policies and procedures, and periodic information quality assessments (using the Information Quality Self-Assessment Tool in Appendix E) will be critical to determining whether the IQ program is achieving its goals.

Development of a plan for evaluation and continued review of the implementation of an IQ program should begin before the program is implemented. The evaluation should ask such questions as:

- What are the objective measures of information quality?
- Does the IQ program, as implemented, respond to the purposes and goals defined in the beginning?
- Is the IQ program responsive to the legal demands identified at the outset?
- Does the IQ program have to be updated in response to events occurring since the inception of the program?
- Is any of the justice data that is shared inaccurate, and what can be done to minimize that occurrence?
- What is the perception of information quality (internal and external/stakeholder)?
- Is the agency's approach to information quality in line with its business purpose?

Refer to Appendix F, How to Evaluate, for more information on evaluation.

D. CONCLUSION

As justice philosophies and technologies allow for more efficient sharing of information, practices must keep pace in order to maintain trust in the system and the effective and efficient pursuit of public safety.

Information flows at the speed of light through entities and agencies in the justice community. No sooner is the information created than it must be updated. The amount of information managed by justice entities grows exponentially every year. Yet, agencies within the justice community make crucial and sometimes life-altering decisions on the basis of this information. In many agencies, questions remain about the quality of the information that is used to make decisions or perhaps shared with other agencies. Is the information current and timely? Does it need to be updated? Maybe it was incorrect in the first place. Is it complete or is there more to the story that a justice official should know before making a decision in reliance on that information? All of these questions center on the quality of information. In the justice community, it is critical that information be as accurate, timely, and complete as possible. In some cases, a life depends on it. Creation of an IQ program is imperative for all justice agencies-to support the effective sharing of good quality information while protecting the justice entity and the community it serves.



For further reading, the following resources may serve as a starting point for agency education, research, and establishment of IQ program elements.

INFORMATION QUALITY GUIDANCE

- Information Quality Resources Web page, Office of Justice Programs' (OJP) Justice Information Sharing Web site: <u>www.it.ojp.gov/IQ_resources</u>
- Information Quality: The Foundation for Justice Decision Making, Global Privacy and Information Quality Working Group (GPIQWG), Global Justice Information Sharing Initiative (Global), U.S. Department of Justice (DOJ), contained in Appendix A of this Guide and also available online at: <u>http://it.ojp.gov/documents/IQ_Fact</u> <u>Sheet_Final.pdf</u>
- Trustworthy Information Systems Handbook, Minnesota Historical Society, State Archives Department, v. 4, 2002
- The Essentials of Information Quality Management, Larry P. English, INFORMATION IMPACT International, Inc.
- Journey to Data Quality, Yang W. Lee, Leo L. Pipino, James D. Funk, and Richard Y. Wang, Massachusetts Institute of Technology Press (2006)
- Introduction to Information Quality, Craig Fisher, Eitel Lauria, Shobha Chengalur-Smith, and Richard Y. Wang, Massachusetts Institute of Technology Information Quality Publication



Planning

 Privacy and Civil Liberties Policy Development Guide and Implementation Templates, Section 6: Planning, Global Privacy and Information Quality Working Group (GPIQWG), Global Justice Information Sharing Initiative, U.S. Department of Justice, <u>http://it.ojp.gov/documents/Privacy</u> <u>Guide Final.pdf</u>

EVALUATION

 Enhancing Local Juvenile Justice Systems in Illinois: Juvenile Justice Council Guidebook and Evaluation Manual, Tim Lavery, Phillip Stevenson, and Tracy Hahn, Illinois Criminal Justice Information Authority, <u>www</u>..icjia.state.il.us/public/pdf/ResearchReports /Juvenile%20Justice%20Council%20 Guidebook%20and%20Evaluation%20Manual .pdf

IX. APPENDICES

APPENDIX A: INFORMATION QUALITY PRIMERS

- 1. Information Quality: The Foundation for Justice Decision Making
- 2. 9 Elements of an Information Quality Program

APPENDIX B: ADDITIONAL IQ DIMENSIONS

- 1. Massachusetts Institute of Technology (MIT) IQ Dimensions
- 2. INFORMATION IMPACT International, Inc.'s IQ Characteristics

APPENDIX C: TEN POLICY GUIDELINES TO CONSIDER

APPENDIX D: SAMPLE MEMORANDA OF UNDERSTANDING (MOUS)

- 1. Carfax and California State Highway Patrol
- 2. U.S. Department of Justice (DOJ) and the St. Louis Regional Data Exchange (R-DEx) Board of Governors
- 3. Federal Bureau of Investigation (FBI) and Agencies Participating in the Law Enforcement National Data Exchange (N-DEx)

APPENDIX E: INFORMATION QUALITY SELF-ASSESSMENT TOOL

APPENDIX F: HOW TO EVALUATE

- 1. Auditing
- 2. Customer Service Analysis
- 3. Continuous Improvement
- 4. Follow-Up and Resolution

APPENDIX G: CAUTIONARY NOTES ABOUT STATISTICAL INFORMATION

- 1. Using Data to Obtain Funding
- 2. Manipulation of Data Standards
- 3. Using Data to Justify a Policy or Practice
- 4. Not Identifying the Limitations of the Information
- 5. Performance Measures
- 6. Sample News Scenario

APPENDIX H: A LITTLE BIT ON THE BIGGER PICTURE: DATA MANAGEMENT

APPENDIX A: INFORMATION QUALITY PRIMERS

Using the following two primers, agency administrators and personnel are educated on information quality; made aware of the importance of collecting, storing, maintaining, using, and sharing quality information; informed of the risks associated with poor information quality; and provided with an overview of the nine elements of an agency-wide information quality program. These primers may be used to raise awareness among management that an information quality program is needed, to educate personnel as part of the information quality program training curriculum, or to promote adoption and outreach of the agency information quality program.

1. INFORMATION QUALITY: THE FOUNDATION FOR JUSTICE DECISION MAKING

With the rapid proliferation and evolution of new technologies, increased data sharing requires increased responsibility for information quality to ensure sound justice decision making. This fact sheet explores information quality as a multidimensional concept encompassing critical relationships among multiple attributes, such as timeliness, accuracy, and relevancy. Hypothetical scenarios are presented depicting situations of good and poor information quality, as well as suggestions for improving the quality of information systems. Research and resource references are provided for further reading.

2. 9 Elements of an Information Quality Program

Developed for high-level, managerial, and administrative personnel within an organization, *9 Elements of an Information Quality Program* outlines the nine key steps that should be followed when developing and implementing an agency-wide information quality program.



INFORMATION QUALITY: The Foundation for Justice Decision Making

Global Justice Information Sharing Initiative United States Department of Justice

A SIGN OF THE TIMES: INCREASING ELECTRONIC Data Exchange Increases the Need For Information Quality

Recent events, such as terrorist threats and catastrophic natural disasters, have revealed a critical need for increasing information sharing across disciplines, jurisdictions, agencies, and geographic areas. As these needs are addressed by the application of new technologies and cross-agency interaction, it is also imperative to address the quality of the information that the justice system depends on for sound decision making.

WHAT IS INFORMATION QUALITY?

Few professionals in any discipline will dispute that "good information is good business." But what constitutes "good," or "quality," information? Conventional wisdom typically equates good information with accurate information. Good information, however, should also be timely, reliable, and complete. Today, information quality (IQ) is understood to be a multidimensional concept that encompasses critical relationships among multiple attributes, such as timeliness, accuracy, relevancy, and others. Together, these attributes contribute to the validity of the information. Quality information is the cornerstone of sound agency decision making and inspires trust in the justice system and in the law enforcement entities that use information. Such information enables agencies to perform their jobs efficiently and effectively.

WHAT PROBLEMS ARISE FROM POOR INFORMATION QUALITY?

The typical triggers for poor information quality are commonplace business challenges such as incomplete records, delays, failure to update record information, data-entry mistakes, or improper releases of information. Additionally, technical issues, information volume, and the widespread availability of data may lead to IQ concerns.

The routine nature of day-to-day business processes underscores the potential for inadvertent generation of inferior IQ. As data is increasingly shared and becomes more readily and rapidly accessible, justice agency control over IQ becomes a bigger challenge.

Poor information quality can be harmful to the individual, the community, and the justice entity. Failure to actively and continuously evaluate and improve IQ in justice-related information sharing practices may result in harm or injustice to individuals, lawsuits and liability, population of other agency databases with inaccurate data, public criticism, inefficient use of resources, or inconsistent actions within agencies.



The following scenario demonstrates why quality information is critical for justice information sharing.

On a busy holiday weekend, a police officer pulls over a speeding driver. After checking whether the vehicle is stolen and whether there are warrants for the registered owner, the officer approaches the vehicle. The driver presents his driver's license, and the officer observes that there are two young girls and an adult female in the car. The officer runs a routine driver's history check and a search of the state's criminal history file. She discovers that the driver has recently been released from prison after serving a term for third-degree sexual conduct with a child. The conditions for parole indicate that the driver is not to be in the company of minors. The officer is able to make an arrest because an appropriate amount of justice information was accessible, complete, and available at the time it was most critical.

More scenarios on page 4.

A FRAMEWORK FOR INFORMATION QUALITY

In the justice system, the notion of good information must expand beyond accuracy, timeliness, and completeness to include all of those attributes that, when taken together, provide a sufficient foundation for good justice decision making.

Today, IQ is well accepted as a multidimensional concept by subject-matter experts in academia, industry, and government who have developed models of the necessary attributes for IQ. One such model, shown in the following table, is based on research conducted at the Massachusetts Institute of Technology (MIT).¹ MIT's Information Quality Dimensions demonstrate these multiple dimensions, expanding the conventional view of information quality to include attributes such as accessibility, security, ease of manipulation, and other attributes that work together to produce quality information for good justice decision making.

HOW DOES INFORMATION QUALITY INTERSECT WITH PRIVACY?

Information quality plays an extremely important role in the protection of privacy rights of individuals. Issues of privacy and information quality are

> Information Quality

inherently linked. Both concepts share multiple information attributes that influence appropriate treatment of personally identifiable information. Agency privacy and civil liberties policies should address information quality in concert with privacy and civil liberties issues. Information quality is specifically enumerated as an

PRIVACY

issue to be considered in the Fair Information Principles²— Data Quality Principle:

DATA QUALITY PRINCIPLE

Personal data should be relevant to the purposes for which it is to be used and, to the extent necessary for those purposes, should be accurate, complete, and up to date.

MIT'S INFORMATION QUALITY DIMENSIONS						
Accessibility	The extent to which data is available or easily and quickly retrievable.					
Appropriate Amount of Data	The extent to which the volume of data is appropriate for the task at hand.					
Believability	The extent to which data is regarded as true and credible.					
Completeness	The extent to which data is not missing and is of sufficient breadth and depth for the task at hand.					
Concise Representation	The extent to which data is compactly represented.					
Consistent Representation	The extent to which data is presented in the same format.					
Ease of Manipulation	The extent to which data is easy to manipulate and apply to different tasks.					
Free of Error	The extent to which data is correct and reliable.					
Interpretability	The extent to which data is in appropriate languages, symbols, and units and the definitions are clear.					
Objectivity	The extent to which data is unbiased, unprejudiced, and impartial.					
Relevancy	The extent to which data is applicable and helpful for the task at hand.					
Reputation	The extent to which data is highly regarded in terms of its source or content.					
Security	The extent to which access to data is restricted appropriately to maintain its security.					
Timeliness	The extent to which information is available in time to perform the task at hand.					
Understandability	The extent to which data is easily comprehended.					
Value-Added	The extent to which data is beneficial and provides advantages from its use.					

1 Fisher, Craig, Eitel Lauria, Shobha Chengalur-Smith, and Richard Y. Wang, *Introduction to Information Quality*, Massachusetts Institute of Technology Information Quality Publication. 2 Organisation for Economic Co-operation and Development (OECD), Fair Information Principles (FIPs), <u>http://it.ojp.gov/documents/OECD</u> _FIPs.pdf.

WHAT CAN YOU DO ABOUT INFORMATION QUALITY?

- Make information quality a priority. Make it clear that you and your organization are committed to improving and controlling information quality. Raise awareness among personnel by measuring the costs, missed opportunities, and decreased agency effectiveness caused by poor information quality. Educate leaders regarding their role in implementing policies, communicating their commitment to information quality, and providing resources to make it happen.
- Establish information quality as a program.

Your commitment to IQ should be reflected in your organization's vision, mission statements, and strategic plans. Achieving high-quality information is the result of a strategic and intentional process—an information quality program. Establishing an IQ program helps to ensure on a continuous basis that information is accurate, timely, complete, and secure.

 Assess the level of information quality in your organization.
 You should proactively conduct selfassessments to measure information quality and identify and address areas that need improvement. Such assessments should be part of a continuous process.

Move from "need to know" to "write to share."

It is important that you and the employees in your organization understand and acknowledge that any information that is written or entered into your system has the potential to be accessed or shared in an internal or external justice information sharing environment. Thus, you and your employees should write or enter the information according to the tenet "write to share."

 Hold the entire organization accountable for information quality. You should build accountability mechanisms and processes into your routine business practices so that every person in the organization knows his or her responsibility and is held accountable for ensuring information quality.

GLOBAL INFORMATION QUALITY SERIES

In addition to this primer, the following resources offer practical guidance on how to make IQ a priority and how to establish and implement an agency-wide IQ program.



9 Elements of an Information Quality Program

Developed for high-level, managerial, and administrative personnel within an organization, *9 Elements of an Information Quality Program* introduces the nine key steps of an agency-wide IQ program.



INFORMATION QUALITY PROGRAM GUIDE

The Information Quality Program Guide is intended to help managers of justice information develop an information quality program for their organizations and is

designed to support those who must analyze their justice entity's information and determine what is needed to ensure good quality information. The Guide features a step approach to the development and implementation of an agency-wide IQ program by leading practitioners through the:

- Establishment of IQ as an agency-wide program.
- Identification and analysis of agency justice events and products.
- Application of standard and customized IQ dimensions.
- Completion of an IQ assessment.
- Implementation and follow-up.



INFORMATION QUALITY Self-Assessment Tool

A mandatory step for any agency in developing an IQ program is the completion of an information quality self-assessment—the evaluation of agency information and reports

associated with justice events. The *Information Quality Self-Assessment Tool* will help an agency determine its relative level of information quality and benchmarks for evaluation, improvement, and accountability. Using this tool can:

- Break down the flow of information in a justice event into the multiple phases of an information life cycle.
- Apply IQ dimensions to each point along this information continuum.
- Uncover gaps in roles, responsibilities, policies, procedures, and technology that beget information quality problems.
- Implement information quality in practice.
- Enhance overall understanding of the effects that a justice agency's business processes—related to information collection, maintenance, management, dissemination, and disposition—have on information quality.

INFORMATION QUALITY SCENARIOS

The following are examples of commonplace events that can occur in any jurisdiction across the country. Although these describe situations of poor IQ, it is important to note that every day, justice practitioners also receive quality information in a timely manner and, based on that information, have been able to effectively perform their jobs. Had IQ issues in the following scenarios been addressed, each one would likely have had a positive outcome.

ACCURACY

- A 27-year-old man with mental retardation is found severely beaten near his home because his address, a group home for the disabled, was mistakenly entered in an Internet registry as the residence of a child molester.
- A middle-aged job applicant was unable to pass an employment background screening because a prison guard mistakenly typed in the social security number of an incarcerated convicted murderer as the job applicant's number.

TIMELINESS

 A restraining order extension was not reported to a statewide database, causing the order to appear "expired." Ultimately, when police responded to a domestic disturbance report, they were unable to

ABOUT GLOBAL

The U.S. Department of Justice's (DOJ) Global Justice Information Sharing Initiative (Global) serves as a Federal Advisory Committee to the U.S. Attorney General on critical justice information sharing initiatives. Global promotes standards-based electronic information exchange to provide justice and public safety communities with timely, accurate, complete, and accessible information in a secure and trusted environment. Global is administered by the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Assistance.

DOJ's Global Advisory Committee (GAC) recommends that local, state, tribal, and federal justice decision makers make information quality a priority. GAC specifically advocates the active and continuous improvement of data and information quality efforts in all information sharing activities. The U.S. Department of Justice and Global member organizations are committed to helping you to improve information quality by providing further resources that will be made available online at:

www.it.ojp.gov/iq_resources.



confirm the restraining order and unable to make an arrest, endangering an at-risk mother and child.

 A court clerk failed to promptly enter a recall of an arrest warrant in the warrant database. As a result, a wrongful arrest was made during a routine traffic stop.

COMPLETENESS

- A failure to enter complete terms of a restraining order allowed a noncustodial parent to abduct a child.
- A clerk failed to enter complete violent-history information on a defendant. This resulted in insufficient security precautions and the death of a judge in the courtroom.

ADDITIONAL RESEARCH

Fisher, Craig, Eitel Lauria, Shobha Chengalur-Smith, and Richard Y. Wang, *Introduction to Information Quality*, Massachusetts Institute of Technology Information Quality Publication.

English, Larry P., *Improving Data Warehouse and Business Information Quality*, INFORMATION IMPACT International, Inc.

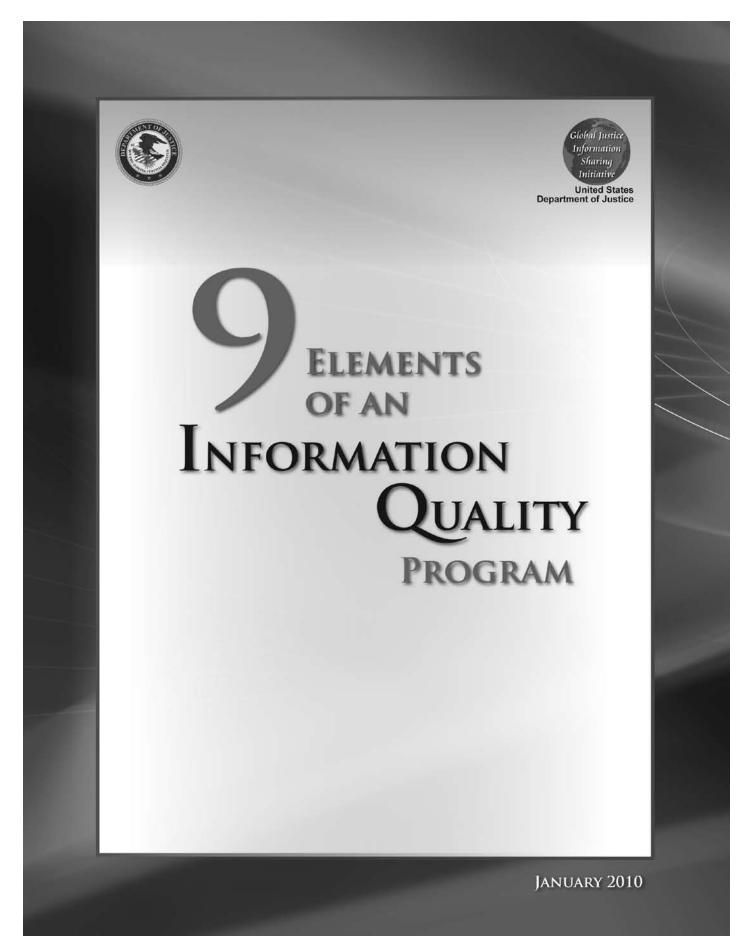
Wang, Richard Y., Yang W. Lee, Leo L. Pipino, and Diane M. Strong, "Manage Your Information as a Product," *Sloan Management Review*, Massachusetts Institute of Technology, Summer 1998, Volume 39, Number 4.

English, Larry P., INFORMATION IMPACT International, Inc. "The Essentials of Information Quality Management," *DM Review*, September 2002.

This projet was supported by Grant Ne. 2007-MACBX-K001 awared by the Bureau of Justice Assistance. In collaboration with the U.S. Department of Justice's Global Justice Information Sharing Initiative. The Bureau of Justice Assistance is a component of the Office of Justice Programs, which also includes the Bureau of Justice Assistance, the National Institute of Justice, the Office of Justice Programs, any the Also includes the Bureau of Justice Assistance, and the Office for Victims of Chime. Points of view or encircles in this document are those of the author and do not represent the official position or policies of the U.S. Department of Justice Assistance of Justice and the Office of Justice and the Office of Pustice and the Office of Justice and the Office of Pustice and the Office of Justice and the Office of Pustice and the Office of Justice and the Office of Pustice and the Office of Justice and the Office of Pustice and the Office of Justice and the Office of Pustice and the Office of Justice Assistance and the Office of Pustice and the Office of Justice and Pustice and

WWW.IT.OJP.GOV/IQ_RESOURCES

Rev. 01/10





Establish Information Quality as a Program

Information about suspects, crime scenes, and other related justice data is often rapidly created and shared. This rapid creation of information and its quickly changing nature necessitate ongoing attention to improve the quality of justice entity information. Achieving high-quality information is the result of a strategic and intentional process—an information quality (IQ) program. Establishing an IQ program helps to ensure on a continuous basis that information is accurate, timely, complete, and secure.

The Information Quality Program Guide is designed to help managers of justice information establish an IQ program for their organization, to support the analysis of justice agency information. and to determine what is needed to ensure good quality information. This primer summarizes the nine program elements of an ongoing agency-wide IQ program. Though these elements are considered steps in a comprehensive IQ program, each requiring completion prior to proceeding to the next, it should be noted that all of these elements must be acknowledged and incorporated into the planning strategy at the formation of the IQ program.

1

The Program Champion: Sponsoring the Creation of an IQ Program

There must be a champion for information quality in the organization. Managers of justice information must endorse and treat IQ as a program.



Governance Structure

A governance structure lays out the responsibility and authority for IQ decisions. Common elements for a successful governance structure include Inclusive Membership, Purpose and Goals, Authority, and a Governance Charter.

Strategic Planning

Strategic planning includes the development of guidance statements (vision, mission, and values statements) and the identification of clear goals and objectives—what needs to be accomplished and the steps needed to get there.

Identify Justice Events and Information Products

Prior to performing an assessment of the quality of the information the agency collects, receives, stores, accesses, shares, and destroys, the agency must first identify what justice events or products it manages or produces. The entity must also research and determine what laws, regulations, and rules dictate information quality protections and procedures for the agency.

Perform the Analysis—IQ Dimensions and the Information Life Cycle

Once the task of identifying justice agency events and information products has been completed, the next step is to individually break down each justice event into the life cycle of that event to illustrate the flow of information from creation and receipt to maintenance, use, and disposition and destruction phases and, furthermore, to acknowledge the roles and responsibilities, policies and procedures, and information technology components of each of those phases. The information life cycle is a simple framework for illustrating the flow of information through a justice event and helps to organize the information, making it easier to apply core dimensions and to determine which contextual dimensions may apply to the justice event information.

Using standard core IQ dimensions (accuracy—free of error, timeliness available when needed, completeness appropriate amount of information, and security—access limitations in place and information integrity maintained) along with agency-defined contextual IQ dimensions (IQ dimensions that may not apply to all justice information at all stages of the information life cycle) will result in a foundation of business rules that will solidify agency IQ objectives and improve the quality of decisions that are based on that information.

Complete the IQ Assessment

Using the Information Quality Self-Assessment Tool contained in the Information Quality Program Guide, the entity will perform an IQ assessment, applying standard core dimensions and the agency-identified contextual dimensions to reveal any gaps in roles and responsibilities, policies and procedures, and information technology that may threaten the quality of the information. Assessing the quality of the information in each agency justice event will result in an IQ baseline for that information which the entity can use as a benchmark or a starting point for improvement.

Evaluate IQ Assessment Findings

The IQ assessment may expose gaps or areas that require improvement in information quality. Since the assessment will determine the baseline level of quality for each justice event, the entity will need to then establish or revise policies, procedures, and technologies to ensure the agency meets or improves upon that level of quality. Implementation may include integration of IQ requirements into information technology (IT) processes, business systems and processes, or information sharing policies.

Education and Training

Fostering agency-wide IQ awareness and ensuring that IQ practices are embedded into the organizational culture will require education and training.

Systematic Monitoring, Evaluation, Review, and Validation

An IQ program is an ongoing activity that will require evaluation, monitoring, and enhancement to ensure that business rules are up to date and actively implemented throughout the organization and that program goals are being met.

Though these last three elements (7 through 9) may appear, chronologically, as final tasks in an IQ program, it is important to realize that these will need to be considered a priority from the beginning—before the program is implemented.

About Global

DOJ's Global serves as a Federal Advisory Committee to the U.S. Attorney General on critical justice information sharing initiatives. Global promotes standards-based electronic information exchange to provide justice and public safety communities with timely, accurate, complete, and accessible information in a secure and trusted environment. Global is administered by the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Assistance.

For More Information

Go to <u>www.it.ojp.gov/IQ_Resources</u> or contact the U.S. Department of Justice's (DOJ) Global Justice Information Sharing Initiative (Global) at (850) 385-0600.

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OTHER RESOURCES FROM THE GLOBAL INFORMATION QUALITY SERIES

Information Quality: The Foundation for Justice Decision Making



With the rapid proliferation and evolution of new technologies, increased data sharing requires increased responsibility for information quality to ensure sound justice decision making. This fact sheet explores information quality as a multidimensional concept encompassing critical relationships among multiple attributes, such as timeliness, accuracy, and relevancy. Hypothetical scenarios are presented depicting situations of good and poor information quality, as well as suggestions on what you can do to improve the quality of your own information systems. Research and resource references are provided for further reading.

Information Quality Program Guide



The *Information Quality Program Guide* is intended to help managers of justice information develop an information quality program for their organizations and is designed to support managers who must analyze their justice entity's information and determine what is needed to ensure good quality information. In support of that effort, the Guide features a step approach to the development and implementation of an agency-wide IQ program and includes a variety of resources and tools, as well as a framework for analyzing a justice entity's business rules for information quality. The information contained within this Guide will lead practitioners through the:

- Establishment of IQ as an agency-wide program.
- Identification and analysis of agency justice events and products.
- Application of standard and customized IQ dimensions.
- Completion of an IQ assessment (using the Information Quality Self-Assessment Tool).
- Implementation and follow-up (policies and procedures, education and training, and systematic monitoring, evaluation, review, and validation).

Information Quality Self-Assessment Tool



A mandatory step for any agency in developing an IQ program is the completion of an information quality self-assessment—the evaluation of agency information and reports associated with justice events. The *Information Quality Self-Assessment Tool* will allow practitioners to:

- Break down the flow of information in a justice event into the multiple phases of an information life cycle.
- Apply standard and customized information quality dimensions to each point along this information continuum.
- Uncover gaps in roles, responsibilities, policies, procedures, and technology that beget information quality problems.
- Implement information quality in practice.
- Enhance overall understanding of the effects that a justice agency's business processes related to information collection, maintenance, management, dissemination, and disposition—have on information quality.

This tool is composed of a matrix of self-assessment questions within a process framework that can be tailored to agency-specific processes. The series of questions will help an agency determine its relative level of information quality and benchmarks for evaluation, improvement, and accountability. Questions are generic and can be customized to a broad range of justice events and associated information components.

APPENDIX B: Additional IQ Dimensions

The two information quality models on the following pages contribute to a deeper understanding of information quality as a multidimensional concept. Neither model is 100 percent suited to all justice processes in the justice system environment; however, they are included here as additional examples for the justice entity to draw upon when determining the contextual dimensions that may apply to the information in a particular justice event. It is important to recognize that the dimensions of information quality are contingent upon the context in which that information is being used. Information that is being used at the early stages of an investigation of a case is different, appropriately so, in its scope from that which is used during the prosecution of the same case. For example, the IQ dimension "reputation," regarding the source of the information, is less important to a law enforcement officer who is obligated to investigate each and every lead in a case until it is solved than it is to the prosecutor who knows that the "reputation" of the source of evidence in a case might be challenged in court. Understanding that information quality is multidimensional and that it varies depending on the context in which information is collected, maintained, and disseminated sets the stage for a conceptual approach to developing an information quality program.

1. MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) INFORMATION QUALITY

DIMENSIONS: During the last several years, many models have been proposed that define what the necessary dimensions are for information quality. One example, shown in Figure 4: Massachusetts Institute of Technology (MIT) Information Quality Dimensions,¹⁰ demonstrates the multidimensional nature of information quality.

Dimension	Definition
Accessibility	The extent to which data is available or easily and quickly retrievable.
Appropriate Amount of Data	The extent to which the volume of data is appropriate for the task at hand.
Believability	The extent to which data is regarded as true and credible.
Completeness	The extent to which data is not missing and is of sufficient breadth and depth for the task at hand.
Concise Representation	The extent to which data is compactly represented.
Consistent Representation	The extent to which data is presented in the same format.
Ease of Manipulation	The extent to which data is easy to manipulate and apply to different tasks.
Free of Error	The extent to which data is correct and reliable.
Interpretability	The extent to which data is in appropriate languages, symbols, and units and the definitions are clear.
Objectivity	The extent to which data is unbiased, unprejudiced, and impartial.
Relevancy	The extent to which data is applicable and helpful for the task at hand.
Reputation	The extent to which data is highly regarded in terms of its source or content.
Security	The extent to which access to data is restricted appropriately to maintain its security.
Timeliness	The extent to which information is available in time to perform the task at hand.
Understandability	The extent to which data is easily comprehended.
Value-Added	The extent to which data is beneficial and provides advantages from its use.

FIGURE 4: MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) INFORMATION QUALITY DIMENSIONS

2. INFORMATION IMPACT INTERNATIONAL, INC.'S INFORMATION QUALITY

CHARACTERISTICS: In addition, Larry English has proposed a framework for information quality¹¹ that includes the three traditional dimensions used by justice professionals and some of those used by MIT and is directed at measuring what is important to the consumers of the information (Figure 5).

FIGURE 5: INFORMATION QUALITY CHARACTERISTICS

- A. Completeness—(1) values, (2) occurrences, and (3) fact type
- B. Validity—conformance to (1) values set and (2) business rules
- C. Accuracy—as compared to the real-world object or event
- D. Precision-of data values to meet all intended uses
- E. Nonduplication—of one record = one real-world object
- F. Consistency—of distributed, redundant, or derived data
- G. Timeliness—of access for all knowledge workers' uses
- H. Currency-of the data for each knowledge worker's use
- I. Objectivity of presentation—format clarity, no bias
- J. Rightness of the data—as measured by customer satisfaction surveys of knowledge workers and information customer "retention"

*Measure what is important to information customers.

¹⁰ Yang W. Lee, Leo L. Pipino, James D. Funk, and Richard Y. Wang, *Journey to Data Quality*, Massachusetts Institute of Technology Press (2006), and Craig Fisher, Eitel Lauria, Shobha Chengalur-Smith, and Richard Y. Wang, *Introduction to Information Quality*, Massachusetts Institute of Technology Information Quality Publication.

¹¹ Larry P. English, The Essentials of Information Quality Management, INFORMATION IMPACT International, Inc.

APPENDIX C: Ten Policy Guidelines to Consider

In drafting an IQ policy, ten policy guidelines should be considered:12

- 1. The organization adopts the basic principle of treating information as a product, not a by-product, and as an enterprise asset that requires full life cycle asset management.
- 2. The organization establishes and keeps IQ as a part of the business agenda.
- 3. The organization ensures that the IQ policy and procedures are aligned with its business strategy, business policy, and business process requirements.
- 4. The organization establishes clearly defined IQ roles and responsibilities as part of its organizational structure and data governance.
- 5. The organization ensures that data quality is maintained as performance outcome of the enterprise data architecture within the larger scope of enterprise architecture.
- 6. The organization takes a proactive approach in managing changing information needs as part of dynamic adaptable enterprise architecture.
- 7. The organization has practical information standards in place.
- 8. The organization plans for and implements pragmatic methods to identify and solve IQ problems and has in place a means to periodically review its IQ and IQ environments as part of its data governance.
- 9. The organization fosters an environment conducive to learning and innovating with respect to IQ activities.
- 10. The organization establishes a mechanism to resolve disputes and conflicts among different stakeholders as part of its data governance.

¹² Yang W. Lee, Leo L. Pipino, James D. Funk, and Richard Y. Wang, *Journey to Data Quality*, Massachusetts Institute of Technology Press (2006), Chapter 11.

APPENDIX D: Sample Memoranda of Understanding (MOUS)

Participating agencies and entities should preemptively address privacy and information quality issues by entering into memoranda of understanding (MOUs) that clearly set forth each respective agency's obligations. MOUs set forth a framework for review and coordination of policy initiatives and guidelines that agencies will abide by when working together to achieve a common goal. Such memoranda typically address, among other issues, the costs associated with participation and how agencies will resolve unanticipated disputes and information quality issues. In order to ensure information quality, the MOU should:

- Establish "ownership of information."
- Establish a formal process to identify and correct errors.
- Address interagency notification (e.g., local agencies need to notify the system administrator concerning issues of data quality).
- Require that the system administering agency and participating agencies identify an individual to serve as a point of contact.
- Include a requirement for periodic audits of data.
- Require that the administering agency and participating agencies have a secure connection for the transmission of data.
- Establish a formal process to evaluate whether data quality issues require notification and, if so, establish criteria for determining whether notification is appropriate.
- Outline the shared responsibilities for costs associated with notice.
- Specify the manner and form of notice.
- Identify the content of the notice.

The following are examples of functioning MOUs.

1. Carfax and California State Highway Patrol-Customer understands that [Vendor Agency] is collecting data from public records and other sources for use in the [name of the service/system being contracted for] and that this data may contain errors and omissions. [Vendor Agency] does not guarantee the correctness of any information furnished in the course of this agreement, and [Vendor Agency] will not be liable for any loss or injury caused in whole or in part, either by its negligence or circumstances beyond its control in procuring, compiling, collecting, filtering, interpreting, or communicating such information. [Vendor Agency] gathers information on an as-available basis. Customer understands that not all information is available for all states and that [Vendor Agency] does not have access to some information that may be available to other entities. Customer also understands that there may be a period of time between receipt of the information by [Vendor Agency] and its inclusion into the [Vendor Agency] database. Customer agrees to hold [Vendor Agency] harmless for any information that is not available at the time of the request by Customer or regarding information which is not in [Vendor Agency's] database for whatever reason.

[Vendor Agency] warrants that the [name of the service/system being contracted for] will, at the time of production, be as current, accurate, and complete as may be achieved using the source/ vehicle data and compilation methods normally employed by [Vendor Agency] in the ordinary course of its business, provided, however, in no event is the [name of the service/system being contracted for] warranted as being error-free. 2. U.S. Department of Justice (DOJ) and the St. Louis Regional Data Exchange (R-DEx) Board of Governors—Each contributing agency has the duty, sole responsibility, and accountability to make reasonable efforts to ensure that information it contributes to R-DEx is accurate, complete, timely, and relevant upon its entry and that it continues to be accurate, complete, timely, and relevant thereafter. Should an agency receive a challenge to or reasonable question about the accuracy of R-DEx information, the agency will notify the contributing agency and the St. Louis R-DEx Board in writing.

3. Federal Bureau of Investigation (FBI) and Agencies Participating in the Law Enforcement National Data Exchange (N-DEx)

Ownership, Entry, and Maintenance of Information

Each party retains sole responsibility and exclusive control and disposition over the content of the information it contributes and may at will, at any time, update or correct any of its information in N-DEx or delete it from N-DEx entirely. All system entries will be identifiable to the contributing party. The content of the contributed information remains the sole responsibility of the contributing party and is under that party's exclusive control and contributed under an express promise of confidentiality.

N-DEx, through the FBI Criminal Justice Information Services (CJIS) Advisory Process, has established a policy that each data contributor will have an obligation to maintain "system discipline," that is to maintain timely, accurate, complete, and relevant information in the N-DEx system. In an effort to maintain system discipline, contributors shall submit data, including any updates or changes to the original submission, on at least a monthly basis. Updates and changes are encouraged as often as a contributor can feasibly execute them.

The contributing party has the sole responsibility and accountability for ensuring that information entered into N-DEx was not obtained in violation of any state, local, tribal, and federal law applicable to the contributor. Data must be pertinent to and within the scope of the authorized law enforcement, counterterrorism, or national security functions of the agency and still meet N-DEx security standards.

Because information entered will be limited to duplicates and summaries of information obtained and separately managed by the entering party within its own record system(s) and for which the contributing party is solely responsible and accountable, information submitted by the participating parties shall not be altered or changed in any way, except by the contributing party. The contributing party should not make any changes to the information it contributes that are not mirrored within the contributing party's source records.

A party that desires to incorporate in its own separate records information contributed by another party, including any analytical products based on another party's information, must first obtain the entering party's express permission. N-DEx information may not be used in the preparation of judicial process such as affidavits, warrants, or subpoenas, without the permission of the party that initially provided the information and corroboration of the information.

Commercially available references, public source information, and software applications—such as commercial directories, census data, mapping applications, and analytical applications—are considered to be nonrecord material and should be maintained in accordance with applicable contracts and/or licensing agreements. To the extent that any such information is relevant and appropriate for preservation as independent records, it will be the responsibility of the accessing party to incorporate such information as records of the accessing party in the party's own official records systems(s) in accordance with that party's records management processes and any applicable contract or licensing agreement.

The N-DEx system will thus be populated only with information derived from each contributing party's own records. The system is not in any manner intended to be an official repository of original records or to be used as a substitute for one, nor is the information in the system to be accorded any independent record status. Rather, this system is merely an application to facilitate the sharing of copies of certain information that may be contributed from preexisting records systems of the parties and to make correlations against such information.

Any system submitting data to N-DEx retains sole ownership of the technology or system design associated with that system. It has the sole responsibility and accountability for ensuring that it is not constrained from sharing this information for these authorized purposes by any laws, regulations, policies, and procedures applicable to the submitting party and making reasonable efforts to ensure the accuracy upon entry and continuing accuracy thereafter of any information contributed.

APPENDIX E: INFORMATION QUALITY SELF-ASSESSMENT TOOL



Global Justice Information Sharing Initiative

United States Department of Justice

Information Quality

SELF-ASSESSMENT TOOL

JANUARY 2010

INFORMATION QUALITY SELF-ASSESSMENT TOOL

INTRODUCTION

The purpose of this Information Quality Self-Assessment Tool (referred to as the "tool") is to provide practitioners with guidance in evaluating the information quality of justice information reports associated with justice events. The tool was developed to increase policymakers' awareness of the importance of assessing information quality by way of the self-administered worksheet, which is designed to provide practical, hands-on assistance to information systems personnel.

This tool will assist practitioners in (1) becoming aware of information quality dimensions; (2) identifying gaps in roles and responsibilities, policies and procedures, and information technology that beget information quality problems; (3) implementing information quality in practice; and (4) enhancing overall understanding of the effects that business processes related to information collection, maintenance, management, dissemination, and disposition have on information quality.

The structure of the tool is a matrix of selfassessment questions within a process framework that can be tailored to meet the specific needs of each agency. The series of questions will help an agency determine its relative level of information quality by clarifying what information quality is and how it applies to specific functions. This resource establishes benchmarks for evaluation, improvement, and accountability. Questions are generic and can be applied to a broad range of justice events and associated information components.

The tool should be used periodically, as part of an ongoing information quality program, to evaluate the impact of changing business practices on information quality. Specifically, it will be most effective if used in conjunction with an agency's information life cycle: collecting, managing, sharing, and disposing of justice information. When utilizing the tool, agencies should keep in mind that there are no right or wrong answers; the tool does not calculate a score; and the more closely answers reflect the current information quality situation, the better-equipped the agency is to approach the information quality program. The matrix on the following pages is structured into dimensions of information quality (both core and contextual), each containing a sequence of specific questions, rationales, confidence levels, status checks, corrective actions, priority ratings, and descriptive remarks. Though some of the questions may not be applicable to every report or process being assessed, the questions were designed to be generally applicable across all justice information exchanges.

Conversely, this matrix is not all-inclusive. Additional contextual IQ dimensions may be applicable to the information report, as well as the necessity to craft additional questions that should be used in the assessment. Each organization utilizing this resource has varying needs and underlying business requirements; therefore, each entity should customize an agency-specific matrix to meet its unique needs.

INFORMATION LIFE CYCLE

Information is handled at every phase of an information life cycle: creation and receipt, maintenance, use, and disposition. The creation and receipt phase refers to the creation or receipt of information, documents, or data, either manually or electronically. Maintenance refers to the static care of a record-that period when data is being maintained or when information is being added to the data for current or future use and may require security and privacy protections. Use refers to information that is actively in use for a justice entity purpose (including continuing information exchanges within and outside the agency and use by multiple staff) and may also require security and privacy protections. Disposition refers to the purging or disposal of (destroyed, archived, or sealed) information at the end of its retention period. Information quality is further affected by the significant components of the above-described phases: within roles and responsibilities, within policies and procedures, and within information technology. Refer to page iii for a chart illustrating the Information Life Cycle.

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IQ DIMENSIONS

Information quality is a multidimensional concept in that information has multiple attributes depending on how it is handled. Traditionally accepted IQ dimensions are accuracy, timeliness, and completeness. However, security is now a fourth dimension that must apply to all information because it is a mechanism to ensure the first three dimensions. There is almost no circumstance in which justice information has no security requirement.

Core IQ Dimensions

Core dimensions are the minimum standards that should be used to evaluate the quality of the information in any selected justice event. The following four minimum standards are **core IQ dimensions**:

- Accuracy—free of error
- · Timeliness—available when needed
- Completeness—appropriate amount of data; all needed and mandatory information is captured
- Security—access limitations and information integrity

Beyond the above-described core dimensions, the information created or captured, maintained, used, and disposed of by agencies may have other requirements that must be met to ensure its quality. These dimensions are termed **contextual IQ dimensions** and are applied, when relevant, to agency-unique justice information. Examples of contextual IQ dimensions and definitions¹ follow.

WE WOULD APPRECIATE YOUR FEEDBACK ABOUT THE IQ SELF-ASSESSMENT TOOL.

Please complete and return the form on pages 61–62.

Contextual IQ Dimensions

Accessibility—extent to which data is available or easily and quickly retrievable

Concise Representation—extent to which data is compactly represented

Consistent Representation—extent to which data is presented in the same format

Ease of Manipulation—extent to which data is easy to manipulate

Interpretability—extent to which data is in appropriate languages, symbols, and units and the definitions are clear

Objectivity—extent to which data is unbiased, unprejudiced, and impartial

Relevancy—extent to which data is applicable and helpful for the task at hand

Reliability—extent to which data is regarded as true and credible

Reputation—extent to which data is highly regarded in terms of its source or content

Understandability—extent to which data is easily comprehended

Value added—extent to which data is beneficial and provides advantages from its use

Verifiability—degree and ease with which the information can be checked for correctness

¹ Craig Fisher, Eitel Lauria, Shobha Chengalur-Smith, and Richard Y. Wang, *Introduction to Information Quality*, Massachusetts Institute of Technology (MIT) Information Quality Publication.

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HOW TO USE THIS TOOL

This is a self-assessment tool for internal use only. It is designed to provide your agency with a practical mechanism to assess, measure, and improve information quality in order to fulfill ultimate goals of improving agency decision making, enabling efficiency and effectiveness, reducing risk and liability, and furthering trust in the justice system.

Freedom of Information Act (FOIA) Exemption—

This document may fall within a Freedom of Information Act (FOIA) exemption and therefore not be subject to disclosure. Refer to your state FOIA law and/or contact your agency's legal office for guidance.

- Expertise to Complete This Tool: Completing this assessment may require participation from multiple individuals representing different areas of expertise within the agency (e.g., policy, technical/systems, data entry). Additionally, though it would be useful for analysis purposes, it is not necessary to complete the entire assessment all at one time.
- Types of Information/Reports: Develop a list of the types of information, justice events, or reports that the agency typically creates in the context of the business process (incident reports, presentencing reports, etc.).
- Select a Report to Test: Select one type of information or report that will undergo the assessment process. Ideally, the assessment will be performed on each report or justice event individually.
- 4. Chart the Flow of Information: Using a table such as the one shown on this page, break down the individual report into phases and components of the information life cycle. (Refer to page i for more information.) This task will illustrate the flow of information from creation and receipt to maintenance, to use, and to disposition and destruction. Identify components of each phase: roles and responsibilities, policies and procedures, and information technology. This framework will help organize the flow of information to make it easier to apply core dimensions and to determine which contextual dimensions may apply to each phase and component of the justice event.

Information Life Cycle Justice Event or Process: Components of Each Phase Life Cycle Roles and Policies and Information Phases Responsibilities Procedures Technology Creation and Receipt Maintenance Use Disposition

5. Select and Customize Contextual

Dimensions: Pages 5 to 40 contain assessment questions relevant to core information quality dimensions. Core dimensions represent the minimum standards that should be used to evaluate the quality of the information or report. Additionally, the assessment will require the application of contextual dimensions. Review the list of contextual dimensions, shown on page ii, and determine which of these may apply to the quality of the report being assessed. When determining which contextual dimensions to apply, consider who creates the report, the level of skill and expertise of those who create and use the report, who maintains the report, who uses the report, and who disposes of the report. Also, at each phase of the information life cycle, consider the risks, determine the goals. define the roles and responsibilities (e.g., data originator, data custodian, data consumer), and generally address other elements of program management that ensure quality at that phase.

Pages 39 to 56 contain sample assessment questions for contextual dimensions that may apply (accessibility, reliability, interpretability, concise representation, and value added). Using the tool, review these for applicability and determine which to retain for use in this assessment. Note that not all of the questions may be relevant to this particular justice event. If needed, identify additional contextual dimensions, and develop questions that are designed to ensure that the information or report meets that IQ dimension. A blank assessment form is available on pages 57–58.

To request a Word version of this tool, please submit your request to GLOBAL@iir.com

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- 6. Complete the Assessment Tool: Now that the tool has been customized with applicable contextual dimensions and relevant questions to ensure those dimensions, the next step is to complete the assessment using both the core dimensions and customized contextual dimensions. Using the tool, review and answer each of the assessment questions for each phase of the information life cycle and for each component within each phase. An explanation of each of the column headings in the tool is provided in the next section.
- Next Steps/Issues to Be Addressed: A notes page is provided at the end of this tool for use in recording next steps and issues to be addressed.

COLUMN DESCRIPTIONS

· Life Cycle Phases and Components: This section of the tool will uncover gaps, if any, in the information process and bring to light areas for improvement. Where appropriate, for each question, answer "Yes" or "No" for each phase of the information's life cycle (creation/ receipt, maintenance, use, and disposition) and indicate whether the dimension is satisfied due to inclusion in roles and responsibilities, policies and procedures, and technology. For example, the first question reads, "Do you validate the information collected?" Consider whether the information is validated at creation and receipt by the application of roles and responsibilities, by the implementation of policies and procedures, and in the technology. Follow the same logic to determine whether the information is validated during maintenance, during use, and at disposition.

Note: The goal of maximizing information quality does not necessitate that "Yes" be answered for every phase. Each question may not be applicable at every point along the life cycle continuum.

 Rationale: Indicate why you are addressing this element of the dimension being measured. Sample answers may include "because we've always done it," "for ethical reasons (the right thing to do)," "for statutory compliance purposes," or "for policy reasons (business requirements)."

- Confidence Level: Enter a confidence level for the quality of the information. For example, how confident are you in your process of validating the information? Evaluation ratings could be "Yes," "No," "Maybe," or "Not Applicable" or could be "Red," "Green," or "Yellow." Use what works for your agency.
- Recommendation: If any of the responses to the information life cycle phases and components are "No" or your confidence levels are low (i.e., uncertain), consider providing a descriptive action of what should be done recommendations that can be made to confirm or increase your confidence level, such as corrections to a role or responsibility or policy or procedure or an update to information technology. Examples include recommendations for new or revised policies or procedures, memoranda of understanding (MOUs), technology, training, etc.
- **Priority:** Enter the agency's priority for addressing the actions or recommendations within the agency or system (low, medium, or high)—what to address first. If the status is "complete," it may not be necessary to identify a priority. Reorder "high, medium, or low" to "low, medium, or high" since that is how it reads on the column.
- Status: Enter a status for each recommended action (complete, in process, not begun).
- Remarks/Notes: Include explanatory notes; for example, if you answered a question "No" but did not provide a recommendation. Additional space is provided on pages 59–60 for notes and next steps.

ABOUT GLOBAL

The U.S. Department of Justice's (DOJ) Global Justice Information Sharing Initiative (Global) serves as a Federal Advisory Committee to the U.S. Attorney General on critical justice information sharing initiatives. Global promotes standards-based electronic information exchange to provide justice and public safety communities with timely, accurate, complete, and accessible information in a secure and trusted environment. Global is administered by the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Assistance.

This project was supported by Grant No. 2007-NC-BX-K001 awarded by the Bureau of Justice Assistance, in collaboration with the U.S. Department of Justice's Global Justice Information Sharing Initiative. The Bureau of Justice Assistance is a component of the Office of Justice Programs, which also includes the Bureau of Justice Statistics, the National Institute of Justice, the Office of Justice and Delinquency Prevention, the SMART Office, and the Office for Victims of Crime. Points of view or opinions in this document are those of the author and do not represent the official position or policies of the U.S. Department of Justice.

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Informatio	Information Quality Self-Assessment Tool							
Agency Name: Person Completing	Agency Name:							
	for each of	oplicable, answer the four phases of r each componen	f the information I	ife cycle				
Assessment Questions			Components	_	Rationale			
	Life Cycle Phases	Within Roles and Responsibilities	Within Policies and Procedures	Within Information Technology				
CORE DIMENS	ION: ACCURACY							
1. Do you validate the information collected?	1. Creation/Receipt	OY ON ON/A	OY ON ON/A	OY ON ON/A				
	2. Maintenance							
	3. Use □Y □N □N/A							
	4. Disposition □Y □N □N/A		OY ON ON/A					
2. Do you have a mechanism to ensure that required fields are completed?	1. Creation/Receipt □Y □N □N/A		OY ON ON/A					
	2. Maintenance							
	3. Use □Y □N □N/A							
	4. Disposition ☐Y ☐N ☐N/A							

Low Complete Medium In Process High N/A N/A	emarks/Notes
Low Complete Medium In Process High N/A N/A	emarks/Notes
Image: Second state sta	
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Low Complete	
□ Medium □ In Process □ High □ Not Begun □ N/A □ N/A	
Low Complete Medium In Process High NvA NvA	
Low Complete Medium In Process High N/A N/A	
Low Complete Medium In Process High N/A N/A	
Low Complete Medium In Process High N/A Not Begun	
Low Complete Medium In Process High N/A Not Begun	
Low Complete Medium In Process High N/A Not Begun	

INFORMATION QUALITY SELF-ASSESSMENT TOOL Where applicable, answer assessment questions for each of the four phases of the information life cycle and for each component within each phase. Assessment Rationale Questions Components Life Cycle Phases Within Within Roles and Within Policies Information Responsibilities and Procedures Technology CORE DIMENSION: ACCURACY 1. Creation/Receipt 3. Do you validate conformance to technical standards? 2. Maintenance 3. Use 4. Disposition 1. Creation/Receipt 4. Do you validate that the information as maintained in 2. Maintenance your systems accurately reflects the data that was collected? 3. Use 4. Disposition

			Self-Assessm	ent—For Internal Use Only
Confidence Level	Recommendation	Priority	Status	Remarks/Notes
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	

INFORMATION QUALITY SELF-ASSESSMENT TOOL

	Where ap for each of t and fo				
Assessment Questions			Components		Rationale
	Life Cycle Phases	Within Roles and Responsibilities	Within Policies and Procedures	Within Information Technology	
CORE DIMENS	ION: ACCURACY				
5. Do you validate that the information as transmitted	1. Creation/Receipt ☐Y ☐N ☐N/A	☐Y	☐Y	☐Y	
accurately reflects the data that was maintained in your system? (Is the recipient of the information receiving the same information that you sent?)	2. Maintenance ☐Y ☐N ☐N/A	□Y	☐Y	□Y	
	3. Use ☐Y	□Y	☐Y	□Y	
	4. Disposition ☐Y ☐N ☐N/A	☐Y	☐Y	☐Y	
6. Once completed and submitted, can a record be corrected?	1. Creation/Receipt ☐Y ☐N ☐N/A	☐Y	☐Y	☐Y	
	2. Maintenance	☐Y	OY ON ON/A	□Y	
	3. Use ☐Y ☐N ☐N/A	□Y	OY ON ON/A	□Y	
	4. Disposition ☐Y ☐N ☐N/A	□Y			

			Self-Assessme	ent—For Internal Use Only
Confidence Level	Recommendation	Priority	Status	Remarks/Notes
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	

INFORMATION QUALITY SELF-ASSESSMENT TOOL Where applicable, answer assessment questions for each of the four phases of the information life cycle and for each component within each phase. Assessment Rationale Questions Components Life Cycle Phases Within Within Roles and Within Policies Information Responsibilities and Procedures Technology CORE DIMENSION: ACCURACY 1. Creation/Receipt 7. Can a report be supplemented? 2. Maintenance 3. Use 4. Disposition CORE DIMENSION: TIMELINESS 1. Creation/Receipt 1. Is information reported close to the time that it is acquired? (Note: 2. Maintenance Question does not apply to corrections report.) 3. Use 4. Disposition

			Self-Assessme	ent—For Internal Use Only
Confidence Level	Recommendation	Priority	Status	Remarks/Notes
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	

	for each of	Where applicable, answer assessment questions for each of the four phases of the information life cycle and for each component within each phase.					
Assessment Questions			Components		Rationale		
	Life Cycle Phases	Within Roles and Responsibilities	Within Policies and Procedures	Within Information Technology			
Core Dimens	ion: Timelines	5					
2. Is information acquired by your agency close to the	1. Creation/Receipt □Y □N □N/A		OY ON ON/A				
time that it is needed by your agency?	2. Maintenance						
	3. Use □Y □N □N/A						
	4. Disposition □Y □N □N/A						
3. Are reports completed in a timely manner so they are useful to those who need them?	1. Creation/Receipt □Y □N □N/A						
	2. Maintenance						
	3. Use □Y □N □N/A		OY ON ON/A				
	4. Disposition						

Confidence Level Recommendation Priority Status **Remarks/Notes** Low Complete In Process Medium 🗖 High Not Begun N/A 🗖 N/A Complete Low Medium In Process 🗖 High Not Begun N/A N/A Complete Low Medium In Process Not Begun 🗖 High 🗖 N/A N/A Complete Low Medium In Process 🗖 High Not Begun N/A N/A Low Complete Medium In Process High Not Begun N/A 🗖 N/A Complete Low ☐ Medium ☐ In Process 🗖 High Not Begun N/A 🗖 N/A Low Complete Medium In Process Not Begun 🗖 High 🗖 N/A 🗖 N/A Low Complete Medium In Process 🗖 High Not Begun N/A N/A

	for each of	pplicable, answer the four phases of or each componen	f the information	life cycle	
Assessment Questions			Components		Rationale
	Life Cycle Phases	Within Roles and Responsibilities	Within Policies and Procedures	Within Information Technology	
Core Dimens	SION: TIMELINES S	5			
 Do you have a standard for submitting reports within 	1. Creation/Receipt □Y □N □N/A		OY ON ON/A		
a specific time frame?	2. Maintenance □Y □N □N/A				
	3. Use □Y □N □N/A				
	4. Disposition □Y □N □N/A				
4A. Is the standard being met?	1. Creation/Receipt □Y □N □N/A				
	2. Maintenance				
	3. Use □Y □N □N/A				
	4. Disposition □Y □N □N/A				

			Self-Assessme	ent—For Internal Use Only
Confidence Level	Recommendation	Priority	Status	Remarks/Notes
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	

INFORMATION QUALITY SELF-ASSESSMENT TOOL Where applicable, answer assessment questions for each of the four phases of the information life cycle and for each component within each phase. Assessment Rationale Questions Components Life Cycle Phases Within Within Roles and Within Policies Information Responsibilities and Procedures Technology CORE DIMENSION: TIMELINESS 1. Creation/Receipt 4B. Is the report submitted to internal (e.g., records management) 2. Maintenance and external (e.g., repository) sources in a timely 3. Use fashion? 4. Disposition TY N N/A 1. Creation/Receipt 4C. Do you have user-specific timeliness standards (analysts, 2. Maintenance prosecutors, correctional caseworkers. etc.)? 3. Use 4. Disposition

Appendix E

			Self-Assessme	ent—For Internal Use Only
Confidence Level	Recommendation	Priority	Status	Remarks/Notes
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	

	for each of	pplicable, answer the four phases of or each componen	f the information	life cycle	
Assessment Questions			Components		Rationale
	Life Cycle Phases	Within Roles and Responsibilities	Within Policies and Procedures	Within Information Technology	
Core Dimens	sion: Timelines s	5			
5. Is the review of the report completed in a timely	1. Creation/Receipt □Y □N □N/A		OY ON ON/A	OY ON ON/A	
manner?	2. Maintenance □Y □N □N/A				
	3. Use ☐Y ☐N ☐N/A				
	4. Disposition ☐Y ☐N ☐N/A				
6. Is the data current enough to make	1. Creation/Receipt □Y □N □N/A		OY ON ON/A		
decisions?	2. Maintenance				
	3. Use □Y □N □N/A		OY ON ON/A		
	4. Disposition				

Confidence Level Recommendation Priority Status **Remarks**/Notes Low Complete Medium In Process 🗖 High Not Begun N/A N/A Complete Low Medium In Process 🗖 High Not Begun N/A N/A Complete Low Medium In Process Not Begun 🗖 High N/A N/A Low Complete Medium In Process Not Begun 🗖 High □ N/A N/A Low Complete MediumHigh In Process Not Begun 🗖 N/A N/A Complete Low Medium In Process Not Begun High N/A N/A Low Complete Medium In Process Not Begun 🗖 High 🗖 N/A 🗖 N/A Complete Low **Medium** In Process 🗍 High Not Begun N/A □ N/A

	for each of	oplicable, answer the four phases of r each componen	f the information I	ife cycle	
Assessment Questions			Components		Rationale
	Life Cycle Phases	Within Roles and Responsibilities	Within Policies and Procedures	Within Information Technology	
CORE DIMENS	sion: Timelines	5			
7. Is the information up to date?	1. Creation/Receipt □Y □N □N/A		OY ON ON/A		
	2. Maintenance				
	3. Use □Y □N □N/A				
	4. Disposition		OY ON ON/A		
Core Dimens	SION: COMPLETER	NESS			
1. Are you collecting the data that is necessary?	1. Creation/Receipt				
	2. Maintenance		OY ON ON/A		
	3. Use □Y □N □N/A				
	4. Disposition				

			Self-Assessme	ent—For Internal Use Only
Confidence Level	Recommendation	Priority	Status	Remarks/Notes
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	

Assessment	for each of	pplicable, answer the four phases of or each componen	f the information I	life cycle	
Questions			Components		Rationale
	Life Cycle Phases	Within Roles and Responsibilities	Within Policies and Procedures	Within Information Technology	
CORE DIMENS	SION: COMPLETER	NESS			
2. Do you regularly assess what data is	1. Creation/Receipt □Y □N □N/A				
necessary?	2. Maintenance □Y □N □N/A				
	3. Use ☐Y ☐N ☐N/A		OY ON ON/A		
	4. Disposition ☐Y ☐N ☐N/A		OY ON ON/A		
3. Does the record allow for supplemental data?	1. Creation/Receipt □Y □N □N/A		⊡Y ⊡N ⊡N/A		
	2. Maintenance				
	3. Use				
	4. Disposition				

Confidence Level Recommendation Priority Status **Remarks**/Notes Low Complete Medium In Process 🗖 High Not Begun N/A N/A Complete Low Medium In Process 🗖 High Not Begun N/A N/A Complete Low Medium In Process Not Begun 🗖 High N/A N/A Low Complete Medium In Process Not Begun 🗖 High □ N/A N/A Low Complete MediumHigh In Process Not Begun 🗖 N/A N/A Complete Low Medium In Process Not Begun High N/A N/A Complete Low Medium In Process Not Begun 🗖 High 🗖 N/A 🗖 N/A Complete Low **Medium** In Process 🗍 High Not Begun N/A □ N/A

A	for each of	pplicable, answer the four phases of or each componen	f the information	life cycle	
Assessment Questions			Components		Rationale
	Life Cycle Phases	Within Roles and Responsibilities	Within Policies and Procedures	Within Information Technology	
CORE DIMENS	SION: COMPLETER	NESS			
4. Are you collecting the data in a consistent	1. Creation/Receipt □Y □N □N/A		OY ON ON/A		
manner?	2. Maintenance □Y □N □N/A				
	3. Use □Y □N □N/A				
	4. Disposition □Y □N □N/A		OY ON ON/A		
5. Are the basic facts present to support the conclusions drawn?	1. Creation/Receipt □Y □N □N/A				
	2. Maintenance				
	3. Use □Y □N □N/A		OY ON ON/A		
	4. Disposition				

Confidence Level Recommendation Priority Status **Remarks**/Notes Low Complete Medium In Process 🗖 High Not Begun N/A N/A Complete Low Medium In Process 🗖 High Not Begun N/A N/A Complete Low Medium In Process Not Begun 🗖 High N/A N/A Low Complete Medium In Process Not Begun 🗖 High □ N/A N/A Low Complete MediumHigh In Process Not Begun 🗖 N/A N/A Complete Low Medium In Process Not Begun High N/A N/A Complete Low Medium In Process Not Begun 🗖 High 🗖 N/A 🗖 N/A Complete Low **Medium** In Process 🗍 High Not Begun N/A □ N/A

INFORMATION QUALITY SELF-ASSESSMENT TOOL Where applicable, answer assessment questions for each of the four phases of the information life cycle and for each component within each phase. Assessment Rationale Questions Components Life Cycle Phases Within Within Roles and Within Policies Information Responsibilities and Procedures Technology CORE DIMENSION: COMPLETENESS 1. Creation/Receipt 6. Will the record be accepted if the required fields are not completed? 2. Maintenance 3. Use 4. Disposition 1. Creation/Receipt 7. If a narrative field is included, is it sufficient to support 2. Maintenance stated facts or opinions? 3. Use 4. Disposition

Confidence Level Recommendation Priority Status **Remarks**/Notes Low Complete Medium In Process 🗖 High Not Begun N/A N/A Complete Low Medium In Process 🗖 High Not Begun N/A N/A Complete Low Medium In Process Not Begun 🗖 High N/A N/A Low Complete Medium In Process Not Begun 🗖 High □ N/A N/A Low Complete MediumHigh In Process Not Begun 🗖 N/A N/A Complete Low Medium In Process Not Begun High N/A N/A Complete Low Medium In Process Not Begun 🗖 High 🗖 N/A 🗖 N/A Complete Low **Medium** In Process 🗍 High Not Begun N/A □ N/A

INFORMATION QUALITY SELF-ASSESSMENT TOOL Where applicable, answer assessment questions for each of the four phases of the information life cycle and for each component within each phase. Assessment Rationale Questions Components Life Cycle Phases Within Within Roles and Within Policies Information Responsibilities and Procedures Technology CORE DIMENSION: COMPLETENESS 1. Creation/Receipt 8. Do mandatory fields map to business requirements? 2. Maintenance 3. Use 4. Disposition CORE DIMENSION: SECURITY 1. Creation/Receipt 1. Do you control access to your data? 2. Maintenance 3. Use 4. Disposition

			Self-Assessme	ent—For Internal Use Only
Confidence Level	Recommendation	Priority	Status	Remarks/Notes
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	

INFORMATION QUALITY SELF-ASSESSMENT TOOL Where applicable, answer assessment questions for each of the four phases of the information life cycle and for each component within each phase. Assessment Rationale Questions Components Life Cycle Phases Within Within Roles and Within Policies Information Responsibilities and Procedures Technology CORE DIMENSION: SECURITY 1. Creation/Receipt 2. Do you log access to establish a record of changes that 2. Maintenance occur? 3. Use 4. Disposition 1. Creation/Receipt 3. Do you provide adequate security controls on 2. Maintenance your data to prevent unauthorized changes? 3. Use 4. Disposition

Confidence Level Recommendation Priority Status **Remarks**/Notes Low Complete Medium In Process 🗖 High Not Begun N/A N/A Complete Low Medium In Process 🗖 High Not Begun N/A N/A Complete Low Medium In Process Not Begun 🗖 High N/A N/A Low Complete Medium In Process Not Begun 🗖 High □ N/A N/A Low Complete MediumHigh In Process Not Begun 🗖 N/A N/A Complete Low Medium In Process Not Begun High N/A N/A Complete Low Medium In Process Not Begun 🗖 High 🗖 N/A 🗖 N/A Complete Low **Medium** In Process 🗍 High Not Begun N/A □ N/A

INFORMATION QUALITY SELF-ASSESSMENT TOOL Where applicable, answer assessment questions for each of the four phases of the information life cycle and for each component within each phase. Assessment Rationale Questions Components Life Cycle Phases Within Within Roles and Within Policies Information Responsibilities and Procedures Technology CORE DIMENSION: SECURITY 1. Creation/Receipt 4. Is there information in the report/ record that allows you to 2. Maintenance set access controls (e.g., protection for victims and witnesses)? 3. Use 4. Disposition TY N N/A 1. Creation/Receipt 5. Are there laws or policies in your jurisdiction that dictate 2. Maintenance accessibility to certain records (sensitive information pertaining 3. Use to domestic violence victims, health/ mental health information, etc.)? 4. Disposition

			Self-Assessme	ent—For Internal Use Only
Confidence Level	Recommendation	Priority	Status	Remarks/Notes
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	

INFORMATION QUALITY SELF-ASSESSMENT TOOL

Assessment	Where ap for each of t and fo				
Questions			Components		Rationale
	Life Cycle Phases	Within Roles and Responsibilities	Within Policies and Procedures	Within Information Technology	
CORE DIMENS	ion: Security				
6. Do you have rules in place that restrict access and	1. Creation/Receipt	□Y	OY ON ON/A	YNN/A	
identifiers of people about whom information is sensitive (for example	2. Maintenance	□Y			
(for example, victims and witnesses) to keep sensitive information from being shared with those who do not have a right to see it?	3. Use □Y □N □N/A	□Y			
	4. Disposition ☐Y ☐N ☐N/A	□Y		YNN/A	
7. Is the record protected commensurate with the degree of confidentiality to which the information is entitled?	1. Creation/Receipt	□Y			
	2. Maintenance	☐Y	OY ON ON/A	□Y	
	3. Use ☐Y ☐N ☐N/A	□Y			
	4. Disposition □Y □N □N/A	OY ON ON/A			

			Self-Assessme	ent—For Internal Use Only
Confidence Level	Recommendation	Priority	Status	Remarks/Notes
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	

INFORMATION QUALITY SELF-ASSESSMENT TOOL Where applicable, answer assessment questions for each of the four phases of the information life cycle and for each component within each phase. Assessment Rationale Questions Components Life Cycle Phases Within Within Roles and Within Policies Information Responsibilities and Procedures Technology CORE DIMENSION: SECURITY 1. Creation/Receipt 8. Are corrections. modifications. and/or additions 2. Maintenance logged? 3. Use 4. Disposition 1. Creation/Receipt 9. When corrections are made, is the original information 2. Maintenance retained for audit purposes? 3. Use 4. Disposition

Confidence Level Recommendation Priority Status **Remarks/Notes** Low Complete In Process Medium 🗖 High Not Begun N/A N/A Complete 🗖 Low In Process Medium 🗖 High Not Begun N/A N/A Complete 🗖 Low Medium In Process 🗖 High Not Begun N/A N/A Complete Low Medium In Process Not Begun 🗖 High N/A 🗖 N/A Low Complete MediumHigh In Process Not Begun N/A N/A **Complete** Low Medium In Process ☐ Not Begun 🗖 High N/A □ N/A Low Complete In Process Medium 🗖 High Not Begun N/A N/A Complete Low Medium In Process 🗍 High Not Begun

N/A

N/A

INFORMATION QUALITY SELF-ASSESSMENT TOOL Where applicable, answer assessment questions for each of the four phases of the information life cycle and for each component within each phase. Assessment Rationale Questions Components Life Cycle Phases Within Within Roles and Within Policies Information Responsibilities and Procedures Technology CORE DIMENSION: SECURITY 1. Creation/Receipt 10.If a record is changed, are those who may already have received 2. Maintenance it notified of the change? 3. Use 4. Disposition CONTEXTUAL DIMENSION: ACCESSIBILITY 1. Creation/Receipt 1. Is the data easily accessible to make critical decisions? 2. Maintenance 3. Use 4. Disposition

			Self-Ass	essment—For Internal Use Only
Confidence Level	Recommendation	Priority	Status	Remarks/Notes
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	

INFORMATION QUALITY SELF-ASSESSMENT TOOL

A	Where ap for each of t and fo				
Assessment Questions			Components		Rationale
	Life Cycle Phases	Within Roles and Responsibilities	Within Policies and Procedures	Within Information Technology	
CONTEXTUAL	Dimension: Acc	ESSIBILITY			
2. Do you store your data where it can be easily accessed	1. Creation/Receipt ☐Y ☐N ☐N/A	□Y	OY ON ON/A	□Y	
or retrieved in a timely and efficient manner by	2. Maintenance	OY ON ON/A			
all users so that critical decisions can be made?	3. Use □Y □N □N/A	OY ON ON/A			
	4. Disposition ☐Y ☐N ☐N/A	YNN/A		YNN/A	
3. Do you capture information in a way that is accessible by all users? (Reworded: Is it important for data to be captured electronically to make it more easily accessible?)	1. Creation/Receipt □Y □N □N/A			☐Y	
	2. Maintenance				
	3. Use ☐Y ☐N ☐N/A	□Y	OY ON ON/A	_ Y _ N _ N/A	
	4. Disposition	□Y	OY ON ON/A		

			Self-Assessm	ent—For Internal Use Only
Confidence Level	Recommendation	Priority	Status	Remarks/Notes
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		☐ Low ☐ Medium ☐ High ☐ N/A	 Complete In Process Not Begun N/A 	
		☐ Low ☐ Medium ☐ High ☐ N/A	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	

INFORMATION QUALITY SELF-ASSESSMENT TOOL Where applicable, answer assessment questions for each of the four phases of the information life cycle and for each component within each phase. Assessment Rationale Questions Components Life Cycle Phases Within Within Policies Within Roles and Information Responsibilities and Procedures Technology CONTEXTUAL DIMENSION: ACCESSIBILITY 1. Creation/Receipt 4. Do you store the information in a way that is accessible by all users? 2. Maintenance 3. Use 4. Disposition CONTEXTUAL DIMENSION: RELIABILITY 1. Creation/Receipt 1. Does the record contain sufficient information for the user 2. Maintenance to assess its reliability? 3. Use 4. Disposition

			Self-Assessm	ent—For Internal Use Only		
Confidence Level	Recommendation	Priority	Status	Remarks/Notes		
		Low Medium High N/A	 Complete In Process Not Begun N/A 			
		☐ Low ☐ Medium ☐ High ☐ N/A	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	Complete In Process Not Begun N/A			
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			

INFORMATION QUALITY SELF-ASSESSMENT TOOL Where applicable, answer assessment questions for each of the four phases of the information life cycle and for each component within each phase. Assessment Rationale Questions Components Life Cycle Phases Within Within Roles and Within Policies Information Responsibilities and Procedures Technology CONTEXTUAL DIMENSION: RELIABILITY 1. Creation/Receipt 2. Do you have criteria for assessing the reliability of the 2. Maintenance

Contextual	DIMENSION: IN	TERPRETABILIT	Y

4. Disposition

3. Use

information?

1. Do you use commonly understood terms,	1. Creation/Receipt ☐Y ☐N ☐N/A		OY ON ON/A	□Y	
acronyms, and abbreviations in the information you collect?	2. Maintenance	OY ON ON/A	OY ON ON/A	□Y	
	3. Use ☐Y ☐N ☐N/A	OY ON ON/A	⊡Y ⊡N ⊡N/A	☐Y	
	4. Disposition ☐Y ☐N ☐N/A		⊡Y ⊡N ⊡N/A	□Y	

			Self-Assessme	ent—For Internal Use Only		
Confidence Level	Recommendation	Priority	Status	Remarks/Notes		
		Low Medium High N/A	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 			
		 Low Medium High N/A 	Complete In Process Not Begun N/A			
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			

INFORMATION QUALITY SELF-ASSESSMENT TOOL

A	Where ap for each of t and fo				
Assessment Questions			Components		Rationale
	Life Cycle Phases	Within Roles and Responsibilities	Within Policies and Procedures	Within Information Technology	
Contextual	Dimension: Int	ERPRETABILIT	Y		
2. Are the terms you use in your information	1. Creation/Receipt	OY ON ON/A	OY ON ON/A	□Y	
commonly understood within and outside your agency?	2. Maintenance				
	3. Use □Y □N □N/A			OY ON ON/A	
	4. Disposition □Y □N □N/A	YNN/A	YNN/A	YNN/A	
3. Is your data captured and transmitted in accordance	1. Creation/Receipt				
with accepted standards so it is capable of being shared?	2. Maintenance	OY ON ON/A			
	3. Use ☐Y ☐N ☐N/A				
	4. Disposition □Y □N □N/A	OY ON ON/A			

			Self-Assessm	ent—For Internal Use Only
Confidence Level	Recommendation	Priority	Status	Remarks/Notes
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 ☐ Low ☐ Medium ☐ High ☐ N/A 	Complete In Process Not Begun N/A	
		 ☐ Low ☐ Medium ☐ High ☐ N/A 	Complete In Process Not Begun N/A	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	Complete In Process Not Begun N/A	
		 ☐ Low ☐ Medium ☐ High ☐ N/A 	Complete In Process Not Begun N/A	
		 ☐ Low ☐ Medium ☐ High ☐ N/A 	Complete In Process Not Begun N/A	

INFORMATION QUALITY SELF-ASSESSMENT TOOL Where applicable, answer assessment questions for each of the four phases of the information life cycle and for each component within each phase. Assessment Rationale Questions Components Life Cycle Phases Within Within Policies Within Roles and Information Responsibilities and Procedures Technology **CONTEXTUAL DIMENSION:** INTERPRETABILITY 1. Creation/Receipt 4. Are the facts distinct from the judgment, interpretation, or analysis? 2. Maintenance 3. Use 4. Disposition CONTEXTUAL DIMENSION: CONCISE REPRESENTATION 1. Creation/Receipt 1. Is the information presented in a concise format? 2. Maintenance 3. Use 4. Disposition

			Self-Assessme	ent—For Internal Use Only		
Confidence Level	Recommendation	Priority	Status	Remarks/Notes		
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			

INFORMATION QUALITY SELF-ASSESSMENT TOOL							
Assessment	for each of	oplicable, answer the four phases of or each componen	f the information I	ife cycle			
Questions			Components		Rationale		
	Life Cycle Phases	Within Roles and Responsibilities	Within Policies and Procedures	Within Information Technology			
CONTEXTUAL	Dimension: Co i	NCISE REPRES	ENTATION				
2. Does the concise representation help users	1. Creation/Receipt □Y □N □N/A	OY ON ON/A	OY ON ON/A	□Y □N □N/A			
accomplish their tasks?	2. Maintenance □Y □N □N/A	□Y		□Y			
	3. Use ☐Y ☐N ☐N/A	OY ON ON/A	OY ON ON/A	□Y			
	4. Disposition ☐Y ☐N ☐N/A	OY ON ON/A	OY ON ON/A	OY ON ON/A			
CONTEXTUAL 1	Dimension: Val	UE ADDED					
1. Is there a mechanism to add data to a record to	1. Creation/Receipt □Y □N □N/A	OY ON ON/A	OY ON ON/A				
enhance it?	2. Maintenance ☐Y ☐N ☐N/A		DY DN DN/A				
	3. Use □Y □N □N/A		OY ON ON/A				
	4. Disposition	OY ON ON/A	OY ON ON/A				

			Self-Assessme	ent—For Internal Use Only		
Confidence Level	Recommendation	Priority	Status	Remarks/Notes		
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 			
		Low Medium High N/A	 Complete In Process Not Begun N/A 			

INFORMATION QUALITY SELF-ASSESSMENT TOOL Where applicable, answer assessment questions for each of the four phases of the information life cycle and for each component within each phase. Assessment Rationale Questions Components Life Cycle Phases Within Within Policies Within Roles and Information Responsibilities and Procedures Technology CONTEXTUAL DIMENSION: VALUE ADDED 1. Creation/Receipt 2. Is there a business purpose for collecting, maintaining, 2. Maintenance and sharing the data? 3. Use 4. Disposition 1. Creation/Receipt 3. Does the data add value to the business purpose? 2. Maintenance 3. Use 4. Disposition

Appendix E

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			Self-Assessm	ent—For Internal Use Only
Confidence Level	Recommendation	Priority	Status	Remarks/Notes
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	

INFORMATION QUALITY SELF-ASSESSMENT TOOL Where applicable, answer assessment questions for each of the four phases of the information life cycle and for each component within each phase. Assessment Rationale Questions Components Life Cycle Phases Within Within Policies Within Roles and Information Responsibilities and Procedures Technology CONTEXTUAL DIMENSION: VALUE ADDED 1. Creation/Receipt 4. When corrections are made, is the original information 2. Maintenance retained for evidentiary purposes? 3. Use 4. Disposition 1. Creation/Receipt 5. Do nonmandatory fields have a legitimate business 2. Maintenance purpose? 3. Use 4. Disposition

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			Self-Assessm	ent—For Internal Use Only
Confidence Level	Recommendation	Priority	Status	Remarks/Notes
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		Low Medium High N/A	 Complete In Process Not Begun N/A 	

INFORMATION QUALITY SELF-ASSESSMENT TOOL

Assessment Questions		 	t within each pha		Rationale
	Life Cycle Phases	Components			Nationale
		Within Roles and Responsibilities	Within Policies and Procedures	Within Information Technology	
CONTEXTUAL	DIMENSION:				
	1. Creation/Receipt				
	2. Maintenance				
	3. Use ☐Y ☐N ☐N/A				
	4. Disposition ☐Y ☐N ☐N/A				
	1. Creation/Receipt ☐Y ☐N ☐N/A				
	2. Maintenance ☐Y ☐N ☐N/A				
	3. Use ☐Y ☐N ☐N/A		OY ON ON/A		
	4. Disposition □Y □N □N/A				

			Self-Assessme	ent—For Internal Use Only
Confidence Level	Recommendation	Priority	Status	Remarks/Notes
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	
		 Low Medium High N/A 	 Complete In Process Not Begun N/A 	

	NEXT STEPS (ISSUES TO BE ADDRESSED)	
59		

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	60

Information Quality Self-Assessment Tool—Feedback Form

To ensure a practical and beneficial self-assessment for justice agencies using this tool, please answer the following questions based on your experiences. User input will allow us to upgrade the assessment tool for easier use and more informative outcomes.

Type of Data Assessed

Introductory Material

Excellent Good Fair Poor Comments/Suggestions:

Directions—"How to Use This Tool"

Excellent Good Fair Poor

Comments/Suggestions:

Completing the Assessment

How many people helped perform the assessment?

How many agency departments are represented by this number?

How much time did it take to complete the assessment and over what period of time?

Did the time necessary to complete the assessment meet your expectations as to how long it would take?

- Met my expectations
- Took longer than expected
- Did not take as long as expected

Information Life Cycle, page iii

Were you able to illustrate the flow of information in the selected justice event in an information life cycle?

- Yes
- No, did not know all of the phases or components
- No, did not understand

Comments/Suggestions:

Assessment Questions

Core Dimensions (Accuracy, Timeliness, Completeness, and Security), pages 5–39:

Did the questions provided for each of the core dimensions apply easily to the data type being assessed?

- Yes, easily applied
- □ Yes, but only after customizing
- Did not apply
- Did not understand the questions

Please explain:

Contextual Dimensions, pages 39-58:

Did you use the sample questions provided for the optional contextual dimensions in your assessment?

- Yes, easily applied
- Yes, but only after customizing
- Did not apply
- Did not understand the questions

Please explain:

For which contextual dimensions did you use the sample questions in your assessment?

Did you apply additional contextual dimensions during the assessment?

- Yes, we added questions for the following dimensions: _____
- □ No, no other dimensions were applicable
- Did not understand how to determine which dimensions to apply

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Confidence Level

Were you able to assign/use a confidence rating for each area of assessment?

- Used a standard confidence-level rating throughout the assessment
- Did not use a confidence rating in this assessment
- Did not understand how to determine confidence levels

Comments/Suggestions:

Tracking IQ Improvement

Did you use the "Recommendations," "Priority," and "Status" columns to help illustrate areas for improvement, assist in prioritizing, and track the status of improvement tasks?

- Yes, I used all of these columns to track the progress of information quality improvement
- I used only the following column(s)
- I did not use any of these columns; no improvement was needed
- I did not use any of these columns; I tracked improvement in another format

Comments/Suggestions for these columns:

Overall Usefulness

Did you find that this tool was useful in: (check all that apply)

- Identifying gaps in:
 - Roles and responsibilities
 - Policies and procedures
 - Information technology
- Providing an overall understanding of the information quality level of the selected data/justice event
- Understanding how information quality applies to specific functions
- Establishing benchmarks for evaluation, improvement, and accountability

Other ways this tool was useful:

Lessons Learned

Are there any lessons learned that you can share regarding the use of this tool?

Other Comments

Please provide additional suggestions for the improvement of this tool:

Global Success Stories

Global is always looking to share success stories and lessons learned regarding the use of Global products.

May we contact you regarding your experiences using this tool?

- Yes
- No

Contact Information

Name: ____

Phone: _

E-mail address:

Please Send This Completed Form to:

E-mail: GLOBAL@iir.com

Fax: Attention: Global (850) 422-3529

Mail:

Global Post Office Box 12729 Tallahassee, FL 32317



APPENDIX F: How to Evaluate

Information quality programs are assessed and evaluated through the use of a number of proven techniques and initiatives. Audits facilitate decision making by objectively assessing program effectiveness against measurable information quality standards. Customer service analysis provides practical feedback and assessment relating to information guality at various levels within the organization. Program evaluation and subsequent improvement should be an ongoing process that includes the use of problem-solving models such as the Plan, Do, Check, and Act (PDCA) cycle. Benefits from effective assessments and evaluations may only be fully realized through relevant and timely actions taken to address and resolve issues pertaining to an organization's information quality program. The following topic areas provide a more detailed discussion of the effective evaluation of information quality programs:

1. AUDITING

Audits can be defined as engagements that provide assurance or conclusions based on an evaluation of sufficient, appropriate evidence against stated criteria, such as specific requirements, measures, or defined business practices. The audit should provide an objective analysis so that management and those charged with oversight can facilitate decision making to use the information to oversee or improve the program's performance and operations, reduce costs, initiate corrective action, and contribute to public accountability and officer safety.

The audit program must detail the plan and document the planning of the work necessary to address the audit objectives. Auditors should obtain an understanding of the nature of the program or program components under audit and the potential use that will be made of the audit results or report as they plan an audit process.

Audits should be designed to provide reasonable assurance that the auditors have obtained

sufficient, appropriate evidence to support the conclusion reached. Auditing is essential to the law enforcement entities' accountability to the public. Controls over the relevance and reliability of information include policies, procedures, and practices that officials of the audited organization have implemented to provide themselves reasonable assurance that operational information they use for decision making and reporting eternally is relevant, reliable, complete, and accurately disclosed in reports.

Auditors should determine which laws, regulations, and provisions within the context of the audit objectives apply to the information sharing data and assess the risk that violation of those laws, regulations, and provisions of contracts or grant agreements could occur. Based on that risk assessment, the auditors should design and perform procedures to provide reasonable assurance of detecting instances of violations that are significant within the context of the audit objectives. Once the violations are determined, recommendations for correcting the deficiencies should be made to the program directors. Every effort to correct the noted deficiencies must be reviewed and acted upon to maintain the integrity of the information.

The program should focus on the quality of information maintained within and used from the information sharing system. During the implementation phase of the program, the core and contextual elements that identify the dimensions that are critical to the creation, maintenance, use, and dissemination of the justice information should be determined. After applying those dimensions to the information and the creators, consumers, and custodians of the information, it is important to develop an audit to verify and maintain that the quality of the information is at the highest level possible. Through the audit process, the organization not only ensures the quality of information but also acknowledges that defined goals and missions of the organization are being met by providing accurate, complete, timely, and secure data for justice entities.

Organizations should have standard operating procedures in place that are available to all users of the information sharing system. The procedures, delineating the responsibility and requirements, should detail the specific core and contextual dimensions to which the organization must conform. The procedures should be specific to each entity's mission and goals, maintaining the integrity and value of the information to be shared by the justice community. The audit is established to verify that the preestablished requirements are followed.

By taking the procedures and the core and contextual dimensions, questions should be developed to verify that the information being maintained in the information sharing system is minimally meeting the entities' preestablished dimensions. Example questions to basic core and contextual dimensions have been included in the *Information Quality Self-Assessment Tool* in Appendix E. The samples provide a basic template intended to be modified to ensure the integrity and security of the organization's specific data needs.

2. CUSTOMER SERVICE ANALYSIS

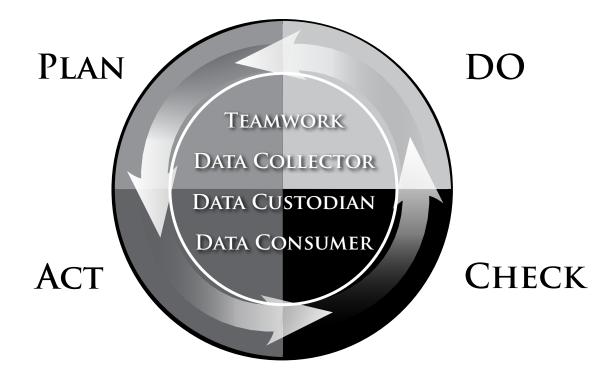
In order to maintain the integrity, reliability, and security of information, after establishing and implementing an audit program, the organization should implement feedback initiatives. The organization must maintain the quality of data for information sharing. The data owners should develop a program to assess the continuous reliability of the information maintained in the information sharing system. The data owners should affirm the quality through the data collectors' and consumers' feedback. The organization will ask questions that will help it conclude whether the data is beneficial, reliable, etc., to the data consumers.

3. CONTINUOUS IMPROVEMENT

Earlier in this Guide, roles that individuals play in information quality were addressed as to how they coincide with the life cycle of information. It was illustrated that everyone plays an important part in ensuring that information is of sufficient quality to enhance decision making. Traditionally, the life cycle of information is a cycle that ends with the disposition of information. However, in many organizations within the justice community, the role that is responsible for the creation and receipt of the information (beginning of the life cycle) is also a role that is part of the disposition decision. Therefore, the life cycle of information can be thought of as a continual process because the disposition of information is contingent on several factors that may include a decision by the person who created or received the original information.

If the life cycle of information is a continuous process, then efforts to improve the quality of information must be continuous as well. According to Dr. W. Edwards Deming, the father of modern quality control, when people and organizations focus primarily on quality, quality tends to increase and costs fall over time. The concept of program development and role responsibilities throughout this document have been developed in such a way as to promote Dr. Deming's principle and the need to continually improve the quality of justice information.

Continuous improvement in the quality of information is a never-ending effort to discover and eliminate the main causes of errors. One way of doing this is through the implementation of the PDCA cycle. This concept is intended to focus improvement efforts on planning, doing, checking, and acting on problem areas in quality control. It is illustrated in Figure 6. FIGURE 6: PLAN, DO, CHECK, ACT (PDCA) CYCLE



The PDCA cycle is a problem-solving model. Each step is described as follows:

Plan—Establish objectives and processes necessary to deliver the results in accordance with the agency's expectations or policies.

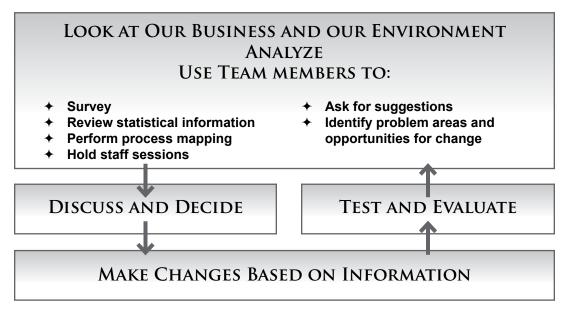
Do—Implement processes for improvements.

Check—Monitor and evaluate the processes and results against expectations or policies.

Act—Apply actions to the outcome of necessary improvement. This means reviewing all the steps (Plan, Do, Check, and Act) and modifying the process to improve it before its next implementation.

Figure 7 illustrates the improvement process.

FIGURE 7: IMPROVEMENT PROCESS



Notice in both models the use of team members who are also individuals responsible for the information quality roles as data collectors, data custodians, and data consumers. These individuals are important in guiding continuous improvement.

The simple models above identify several techniques used to analyze the issue of information quality. These techniques are not exhaustive; they are a sample of possible tools. The next step is to discuss and decide what process improvements to make and then make the changes and test and evaluate the changes to determine their effectiveness.

4. FOLLOW-UP AND RESOLUTION

It is important to recognize that an information quality program is a process of continuous improvement. Although the program elements are listed in sequence, there is a feedback loop to the process in which issues that are uncovered by monitoring and evaluating the information quality program are addressed, often by a revision of program goals, responsibilities, or policies. There is no end game to a justice agency's information quality program. As program challenges are identified, new technologies emerge, and the set of justice partners expands, new and revised information quality program strategies will need to be developed.

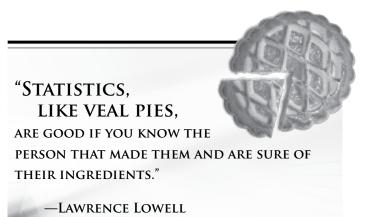
APPENDIX G: Cautionary Notes About Statistical Information

This Guide focuses on developing a program for ensuring the quality of information collected, maintained, and disseminated by justice agencies. Because the intent of this Guide is to provide guidance to justice agencies on developing an information quality program, a detailed discussion of how to ensure the quality of information that is aggregated from a single agency or multiple agencies, such as crime statistics or other compiled statistical reports, is outside the scope of this Guide. Yet, it is important for an agency to understand that even if its information is of high quality that is a result of a vital information quality program, it does not ensure that users will capitalize upon it or use the good information fairly. More important, not all these challenges to good summary information are a function of bad intent. In many instances, they are simply a result of the lack of a comprehensive understanding of how summary information can be best used to enhance the effectiveness and efficiency of the justice system. Below are just a few examples of how good information is turned into bad:

HOW GOOD INFORMATION IS TURNED INTO BAD

1. USING DATA TO OBTAIN FUNDING

Many funding agencies require the applicant to provide data to justify the need for external resource support. Ideally, the data that is used presents a comprehensive perspective on the problem being addressed. Unfortunately, in a time of limited resources to address significant jurisdictional needs, users of information will sometimes feel the need to use only the information that justifies their funding request and ignore other information that does not support their request. This selective use of data is at best misleading and at worst dishonest.



President, Harvard University, 1909

2. MANIPULATION OF DATA STANDARDS

It is possible to manipulate data standards to allow the information to reveal a predetermined outcome. For example, a local jurisdiction might relax its definitional standards of specific crime to allow for a desired result (e.g., a decline in a specific type of crime). In turn, an agency that summarizes data from multiple jurisdictions might have a stricter standard of that same crime that reveals a different result. In each case, by each agency's standards, there is quality information, yet the two sources for the same information might yield different results.

3. USING DATA TO JUSTIFY A POLICY OR PRACTICE

It is poor practice to implement a justice policy or practice and then seek out the information that justifies that policy or practice. In fact, in an environment where high-quality information is available, the process should be just the opposite. Good information can be used to inform good justice policy and practice. This is the critical advantage of good information: it helps policymakers and practitioners make wise decisions that enhance the effectiveness and efficiency of the justice system. Even good information can be used irresponsibly to justify a political or practical agenda.

4. NOT IDENTIFYING THE LIMITATIONS OF THE INFORMATION

Practically speaking, there are many instances in which changes to how information is collected due to changes in technology or changes in policy affect the comparability of the information and the appropriateness of aggregating the information. While these are real and often unavoidable issues, they are often ignored or not acknowledged when presenting the aggregated data. Whenever this occurs, the compiler of aggregated information should identify the practical or policy changes that affect the comparability of the information.

5. PEFORMANCE MEASURES

Recently, there has been a significant push to use information to assess the performance of justice personnel and justice agencies. Yet what is often not considered is what information should be used to fairly and accurately measure individual or agency performance. For example, is the number of arrests police officers make a complete measure of their performance, or do other aspects of their work (citizen satisfaction, community disorder problems addressed, etc.) also apply? When considering or reviewing performance measures, it is critical to openly and clearly identify the complete criteria by which performance will be assessed.

6. SAMPLE NEWS SCENARIO

City Crime Up 10 Percent; City Had Reported 22 Percent Drop

A city, it turns out, did not see a dramatic 22 percent drop in crime last year. Instead, it logged a 10 percent increase—the biggest percentage jump in at least a decade. Police officials said the city had 41,870 crimes in 2007, not the 29,474 reported to the state in February. Why were the numbers so far off? The Police Chief cited a transition to a new method of counting crimes, combined with new computer systems; not enough training, so many officers were not filing reports properly; not enough people entering data, so a backlog grew; not enough communication between the data entry people, who knew there was a problem, and top department officials; and no one person in charge.

After a city audit, the police department realized it had neglected to count thousands of incomplete reports that were lingering in the system. The Police Chief said that although the new total represents a jump from 2006—when 37,960 crimes were reported-the figure is in line with 2003-2005 and is lower than the six years before that. Several crime categories showed troubling increases last year, including rape and aggravated assault. Those increases pushed the total of violent crimes to its highest level since 1997. The city was the only large city in its state to switch to the more detailed National Incident-Based Reporting System (NIBRS) from the summary-based reporting system, known as Uniform Crime Reports (UCR), from which the statistics in this story are drawn.

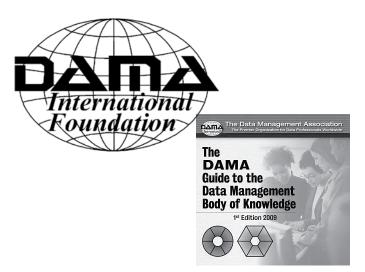
APPENDIX H:

A LITTLE BIT ON THE BIGGER PICTURE: DATA MANAGEMENT

The discipline of Data Management has emerged over the years in a way that is similar to that of other disciplines, such as project management or enterprise architecture. Through the Data Management Association (DAMA), the discipline now is developing a *Data Management Body of Knowledge* (DMBOK) that includes Information Quality/Data Quality as a subset. When considering the structure and organization of an IQ program, it does help to understand some of the dependencies that may exist within other areas of the broader discipline of Data Management, which encompasses IQ as well as many other related functions involving data.

Data Governance is at the heart of Data Management, and it involves much of the same processes that were discussed in Section III of this Guide, except that those processes are applied to a broader range of areas that include:

- Data Architecture Analysis and Design
- Data Management
- Data Security Management
- Reference and Master Data Management
- Data Warehousing and Business Intelligence Management
- + Document, Record, and Content Management
- Metadata Management



The DMBOK also sets out a framework of environmental elements. At the heart of these elements are the goals and principles of an agency or organization. Six other elements include:

- Organization and Culture
- Activities
- Deliverables
- ✤ Roles and Responsibilities
- Practices and Techniques
- Technology

When creating an IQ program, it may be of help to examine these environmental elements at the outset to determine how the IQ program may be impacted by them.

For more information, refer to Data Management Association (DAMA) Data Management Body of Knowledge (DMBOK), Introduction and Project Status, Mark Mosley, DAMA, 2007: <u>http://www.dama.org/files</u> /public/DI_DAMA_DMBOK_Guide_Presentation_2007 .pdf.

