

# Guidance and Tools for Implementing Environmental Quality Systems



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# Purpose

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- **Introduce guidance and regulatory drivers for implementing environmental quality systems**
- **Introduce existing electronic tools for QA**
- **Discuss how guidance and tools can be integrated and where there are still gaps**

# Drivers for Creating Guidance and Tools

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- **Data quality that meets needs**
- **Savings in costs/time for repeated work, reaching agreements on site closure**
- **Information Quality Guidelines**

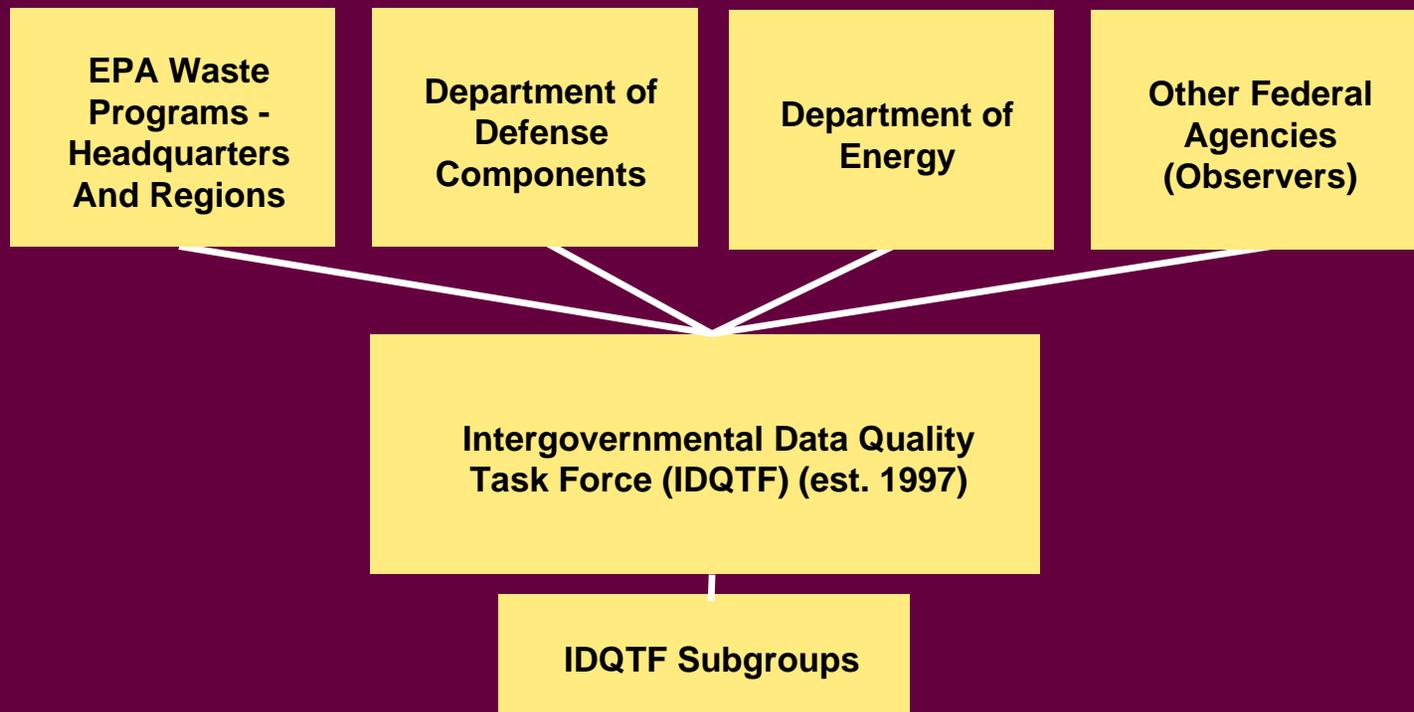
# Information Quality Guidelines

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- ***Guidelines for Ensuring the Quality, Objectivity, Utility, and Integrity of Information Dissemination by the Environmental Protection Agency (October 2002)***
- **EPA's policy and procedural guidance for ensuring and maximizing the quality of information it disseminates**
  - Mechanism to correct information disseminated by the EPA
  - General assessment factors for evaluating the quality of scientific and technical information

# Intergovernmental Data Quality Task Force (IDQTF)

- Formed in 1997 to address inconsistencies and deficiencies within quality systems
- Chaired by Director of Federal Facilities Restoration and Reuse Office (FFRRO)



# Uniform Federal Policy for Implementing Environmental Quality Systems (UFP-QS)

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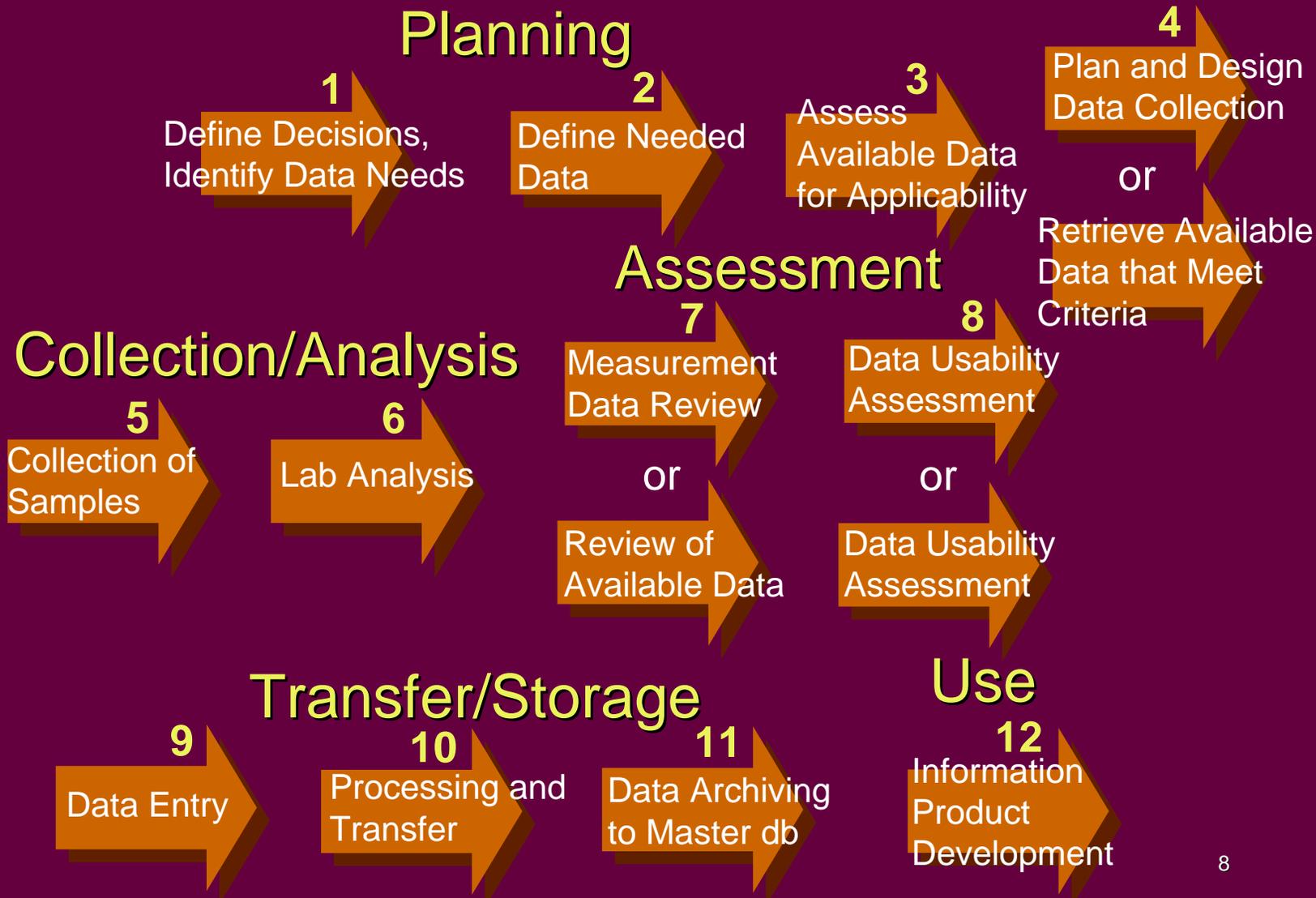
- **A guide for documenting and implementing a quality system**
- **Based on ANSI/ASCQ E-4**
- **Formally adopted for hazardous waste by EPA, DoD, and DOE (Jan. 2003)**

# UFP-QS Implementation

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- **Depends on individual organization**
- **May require development of new QMP or evaluation of existing quality system**
- **Requires oversight functions**

# Quality System Should Link All Data Collection and Use Steps Together



# Electronic QA Tools

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- **Many tools that aid in planning and implementing quality in projects exist or are currently under development**
- **Quality system must support project implementation**
  - Make sure appropriate tools are available
- **Concern is being able to link tools and spread word about their availability**

# Visual Sample Plan (VSP)

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- **Allows user to define an optimal, technically-defensible sampling scheme**
  - Balances uncertainty with project resources
- **Supports many common sample designs: simple random, grid and transect, ranked set, adaptive cluster, etc.**
- **Menu driven with extensive help features**
- **<http://dgo.pnl.gov/vsp>**

# Field Environmental Decision Support (FIELDS)

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- Provides integrated environmental decision making through a suite of sample design, database query, geospatial modeling, and analysis (human health and ecological risk assessment) modules
- Implemented in ArcView
- Link to VSP (import and export)
- Menu-driven, requires competence in ArcView
- [www.epa.gov/region5fields/](http://www.epa.gov/region5fields/)

# Spatial Analysis and Decision Assistance (SADA)

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- Stand-alone, integrated set of spatial analysis, statistical risk assessment, and second-round sampling decision tools
- Provides data visualization in two or three dimensions
- Supports various geospatial interpolation methods and human health and ecological risk assessment
- Menu-driven, requires understanding of technical basis of tools
- [www.tiem.utk.edu/~sada/](http://www.tiem.utk.edu/~sada/)

# Staged Electronic Data Deliverable (SEDD)

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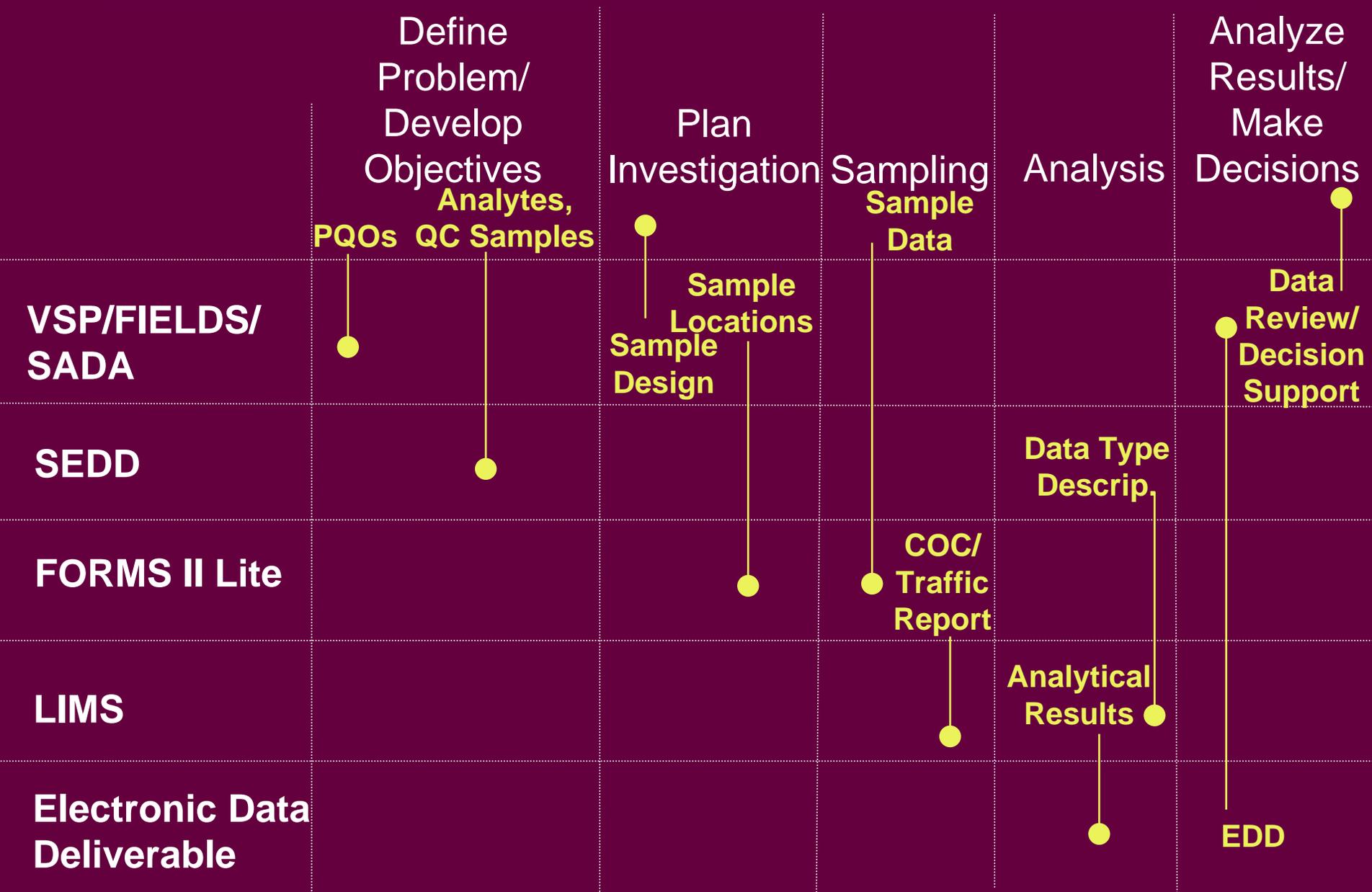
- **Provides framework for specifying standardized electronic data deliverable formats**
  - Document type definitions (DTDs) developed using XML
- **Contains comprehensive Data Element Dictionary with pre-defined data elements**
- **Requires familiarity with XML**
- **[www.epa.gov/superfund/programs/clp/sedd.htm](http://www.epa.gov/superfund/programs/clp/sedd.htm)**

# Field Operations and Records Management System (FORMS) II Lite

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- Simplifies and accelerates the sample documentation process in the field
- Users can export sampling data electronically, reducing transcription errors
- Mandated for CLP
- Step-by-step wizard that allows customization of labels and reports
- FORMS II LIMS allows exportation to lab's system
- [F2lite@dyncorp.com](mailto:F2lite@dyncorp.com)

# Electronic Tools Linkages



# Questions?

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