

Applying Management System Concepts to Environment al Activities



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Outline

- ✓ Background
- ✓ Explores the concept of implementing management systems
- ✓ Review of international standards that are applicable to managing all environmental activities
- ✓ Summary



Background

- ✓ The International Standards Organization (ISO) and the American Society for Quality (ASQ) encourage the use of management systems for all types of business activities.
- ✓ In the environmental testing community, management systems are part of the accreditation of testing laboratories and Field Sampling Measurement Organization (FSMO) using the TNI standards



Background

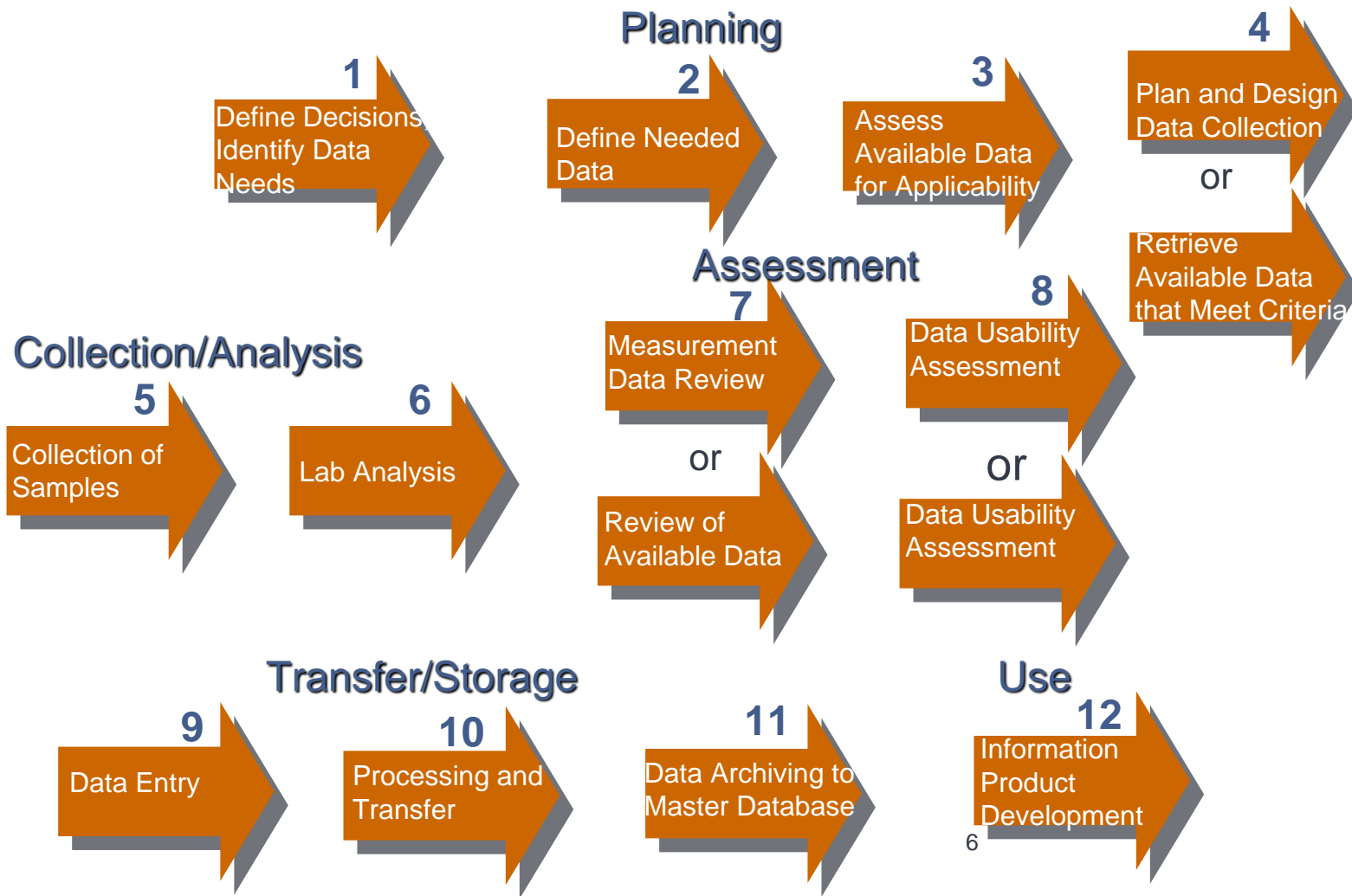
- ✓ Other environmental activities include:
 - Sampling design or Systematic Planning Process (SPP)
 - Data verification/validation
 - Modeling of sites and risks
 - Environmental assessment
 - Etc.....
- ✓ What criteria is used for managing these activities



Environmental Activities

- ✓ Very complex when looking at the whole process
- ✓ If we only manage one to two steps the decision cannot be made with confidence
- ✓ Reason for repeat testing is improper planning or design of the project





Sample Collection

- ✓ TNI took the first step towards building the framework by developing a management system standard for Field Sampling and Measurement Organizations (FSMOs) in 2009 and revised in 2014 and is currently under revision in 2021. (NEFAP)



Testing and Sampling

- ✓ The international standard for testing labs now includes the requirements for sample collection in 2017.
- ✓ TNI is working on incorporating ISO/IEC 17025 2017 in the testing standard (NELAP)
- ✓ If the laboratory collects samples the requirements for sampling applies



Management System Basics

- ✓ Criteria, Scope and Objective
- ✓ Document control
- ✓ Records control
- ✓ Management review
- ✓ Internal audit
- ✓ Corrective action
- ✓ Improvement based on risk



New Regulation or Management

- ✓ The international community realized the collection of the sample has a significant impact on the data reported by the laboratory
- ✓ EPA has been stressing sample collection since the 1990's, but no new regulations
- ✓ Apply management system concepts to environmental activities ?



Sample Collection

- ✓ Sample collection is not regulated in most environmental programs
 - SDWA has requirements for the sample and the laboratory must determine if the sample was collected properly.
- ✓ See *“EPA Has Not Implemented Adequate Management Procedures to Address Potential Fraudulent Environmental Data”*, May 2014, Report 14-P-0270



Use of Environmental Information

- ✓ The international standards provides the framework (Not what to do) for competency, integrity and the needed technical aspects for performing any part or all of the environmental activity steps for using the data.



Organization

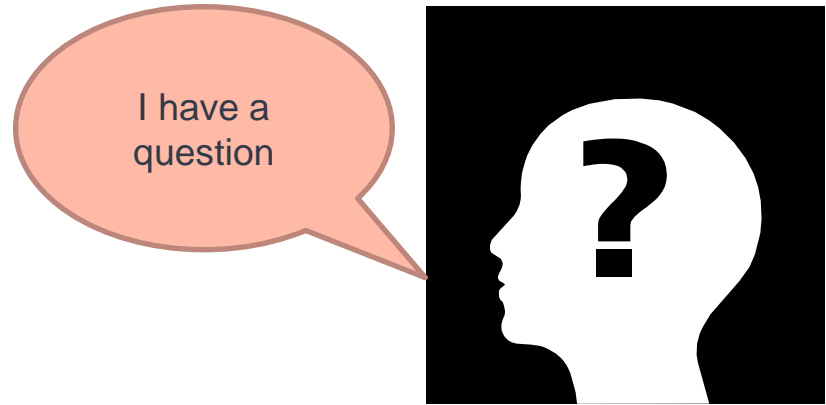
- ✓ If the organization performing one or more of the environmental activities follows the associated international standard for the applicable management system, it will help to ensure the information presented to the decision makers is appropriate.



Summary

Management systems checks and balances ensure that the activity is performed in accordance with criteria (regulatory or technical) to meet the objectives of the user of the information.

Questions



Thanks!

Any questions?

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