

Environmental Management Systems and Auditing

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Continual Improvement

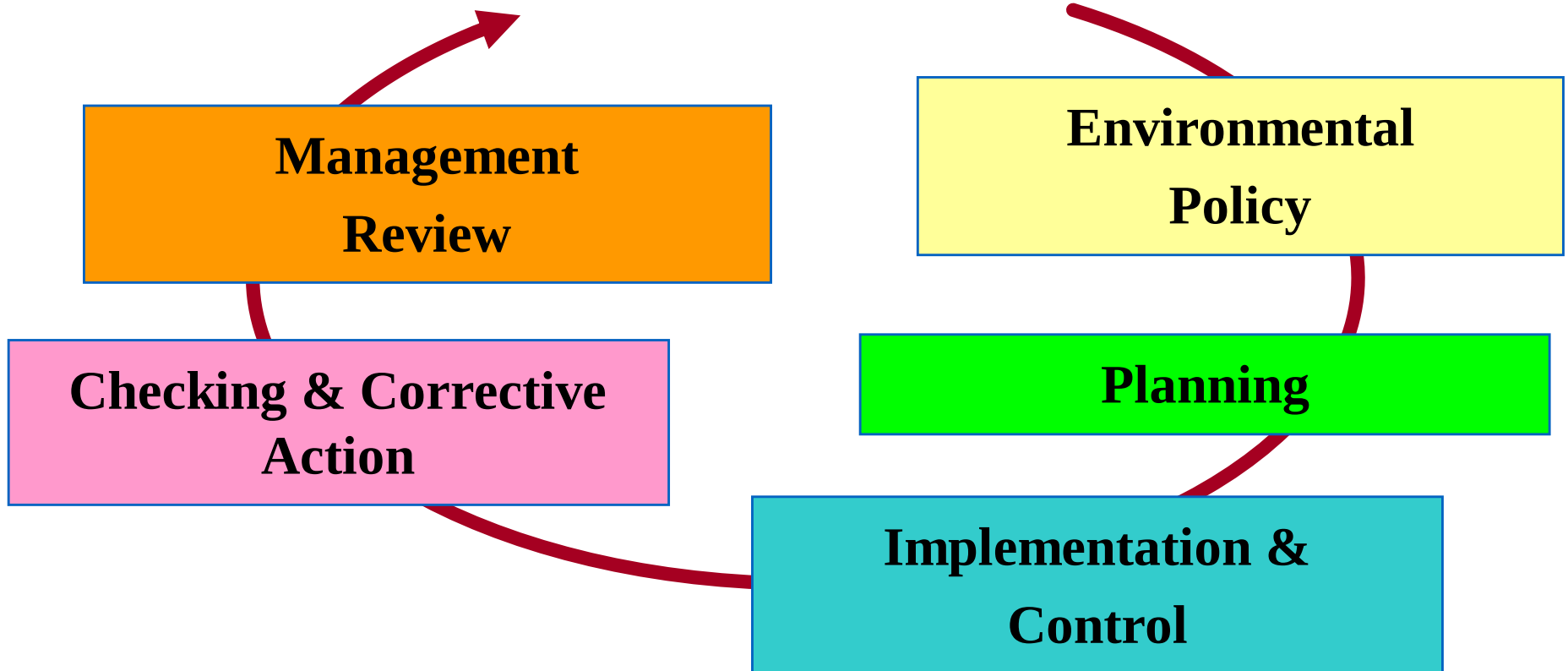
**Management
Review**

**Environmental
Policy**

**Checking & Corrective
Action**

Planning

**Implementation &
Control**



Environmental Management System Audit

- ❖ A systematic and documented verification process of objectively obtaining and evaluating evidence to determine whether an organization's environmental management system conforms to the environmental management system audit criteria set by the organization, and for communication of the results of this process to management.

EMS Audit

- Not a compliance audit,
- Done by those with EMS auditing training/experience,
- Periodic “snap-shot” assessment to determine if system is working.

Internal vs. External Audits

- **Internal audits** (First Party audits) are those done by participants of the EMS being audited (can be employees or consultants who have assisted with the development of the EMS).
- **Second party** audits are those done by auditors from an organization (e.g., client) that wishes to ensure that its requirements are being met.
- **Third party** audits are done by an independent entity such as an outside consultant or registrar.

Certification vs. Self Declaration

- In all cases, representation is made to outside parties of conformance to EMS criteria.
- Certification is done by accredited, third party registrars.
- Self-Declaration is any other claim of conformance other than certification.
- Self-Declaration should be more than internal EMS audit.

ISO Auditing Guidelines

- ❑ ISO 19011 Guidelines for Quality and/or Environmental Management Systems Auditing.
- ❑ ISO 19011 provides principles for managing and conducting audits.
- ❑ Registrars must adhere to these at a minimum.

Key Legal and Other Requirements

- I. All relevant media regulations (RCRA, CWA, CAA, etc).
- II. Executive Orders (13148, 13101, 13327, etc).
- III. Agency and sub-agency level requirements.
- IV. Voluntary programs.

Self Declaration and EO 13148

- ❖ Protocol developed by EO Workgroup
- ❖ EMS verification procedures will rest with each Agency/Bureau
 - ❖ Procedures due by December 31, 2004,
 - ❖ Updated at least every five years.
- ❖ Procedures will require an independent basis.
- ❖ Facilities may self declare prior to procedures using protocol guidance.

Agency Self Declaration Procedures

Will include :

- Selection and direction for use of evaluation guide,
- Frequency of internal evaluations,
- Requirement for management declaration,
- Frequency of independent review,
- Makeup of review team including qualifications of independent reviewers.

Participants

- **Lead auditor** – Directs the audit team and process
- **Auditor** – Audit team member; evaluates the EMS under direction of lead auditor
- **Audit team** – Group consisting of lead auditor and other auditors
- **Client** – Entity requesting the audit (may or may not be auditee)
- **Auditee** – Entity being audited

Audit Scope

- The audit scope defines the extent and boundaries of the audit; for a complete audit it is the same as the scope of the EMS.
- If the audit is done in parts, the scope of any one specific audit will be a subset of the entire EMS.

Audit Objective

- The audit objective is the reason the audit is being conducted.
- Typically, the main objective is to verify conformance to the standard and the EMS procedures.



Audit Criteria

- ✓ Policies, practices, procedures or other requirements against which the auditor compares collected audit evidence about the EMS.
- ✓ NOTE: Requirements may include but are not limited to standards, guidelines, specified organizational requirements, voluntary programs and legislative or regulatory requirements.

Audit Evidence

- ✓ Verifiable information, records or statements of fact relevant to the audit criteria.

NOTES:

- ✓ Audit evidence, which can be qualitative or quantitative, is used by the auditor to determine whether audit criteria are met.
- ✓ Audit evidence is typically gathered from interviews, examination of documents, observation of activities and conditions, existing results of measurements and tests or other means within the scope of the audit.

Audit Findings

- ✓ Results of the evaluation of the collected audit evidence compared to the agreed audit criteria.

NOTE: The audit findings provide the basis for the audit report.

Audit Conclusion

- ✓ Outcome of an **audit** provided by the **audit team** after consideration of the audit objectives and all **audit findings**.

Environmental Management System

- “The part of the overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing achieving and reviewing the environmental policy.” ISO14001.
- An environmental management system brings together the people, policies, plans, review mechanisms, and procedures used to manage environmental issues at a facility or in an organization.

An EMS is *Environmental*

- i. Facilitates environmental compliance
- ii. Addresses environmental impacts
- iii. Broadens environmental responsibilities to all whose work can have a significant impact on the environment
- iv. Environmental office has technical expertise to contribute

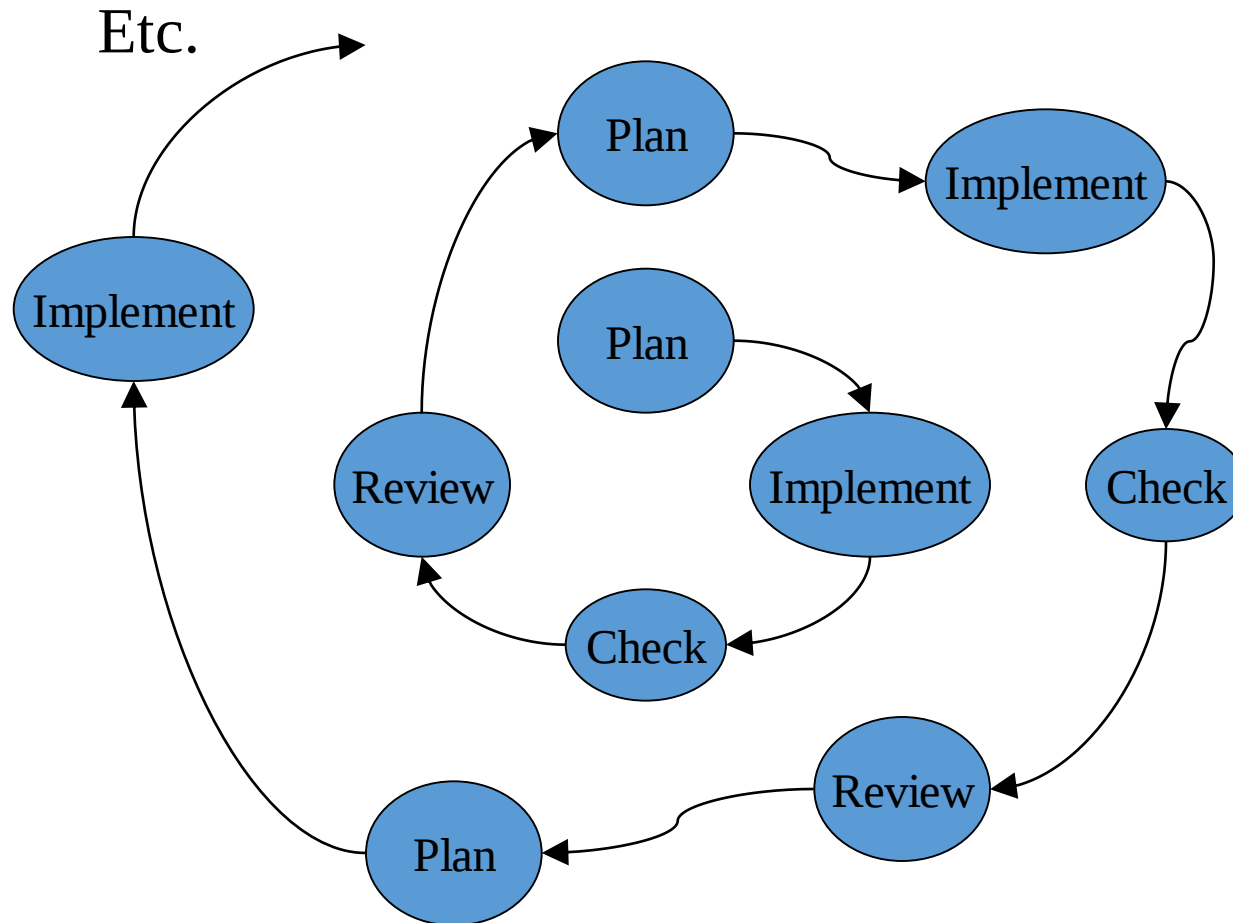
An EMS is *Management*

- ✓ Must have commitment of top managers
- ✓ EMS owned by facility manager
- ✓ Must be consistent with other management systems

An EMS is a *System*

- ✓ Requires awareness of formal structure
- ✓ Addresses policies, procedures, programs
- ✓ Doesn't specifically address compliance components (drums, labels, etc.)

Continual Improvement Cycle



EMS Frameworks

- ✓ ISO 14001 Standard
- ✓ Code of Environmental Management Principles
- ✓ Compliance-Focused EMS
- ✓ Eco-Management and Audit Scheme

ISO 14001 Components

- ❖ Environmental Policy
- ❖ Planning
- ❖ Implementation and Operation
- ❖ Checking and Corrective Action
- ❖ Management Review

Environmental Policy

- i. Issue a policy statement signed by facility manager
- ii. At a minimum, commit to
 - i. Continual improvement
 - ii. Pollution prevention
 - iii. Environmental compliance
- iii. Identifies EMS framework
- iv. Publicly available

Planning

1. Identify aspects and impacts from facility activities, products, and services
2. Review legal requirements
3. Set objectives and targets
4. Establish formal EMS program

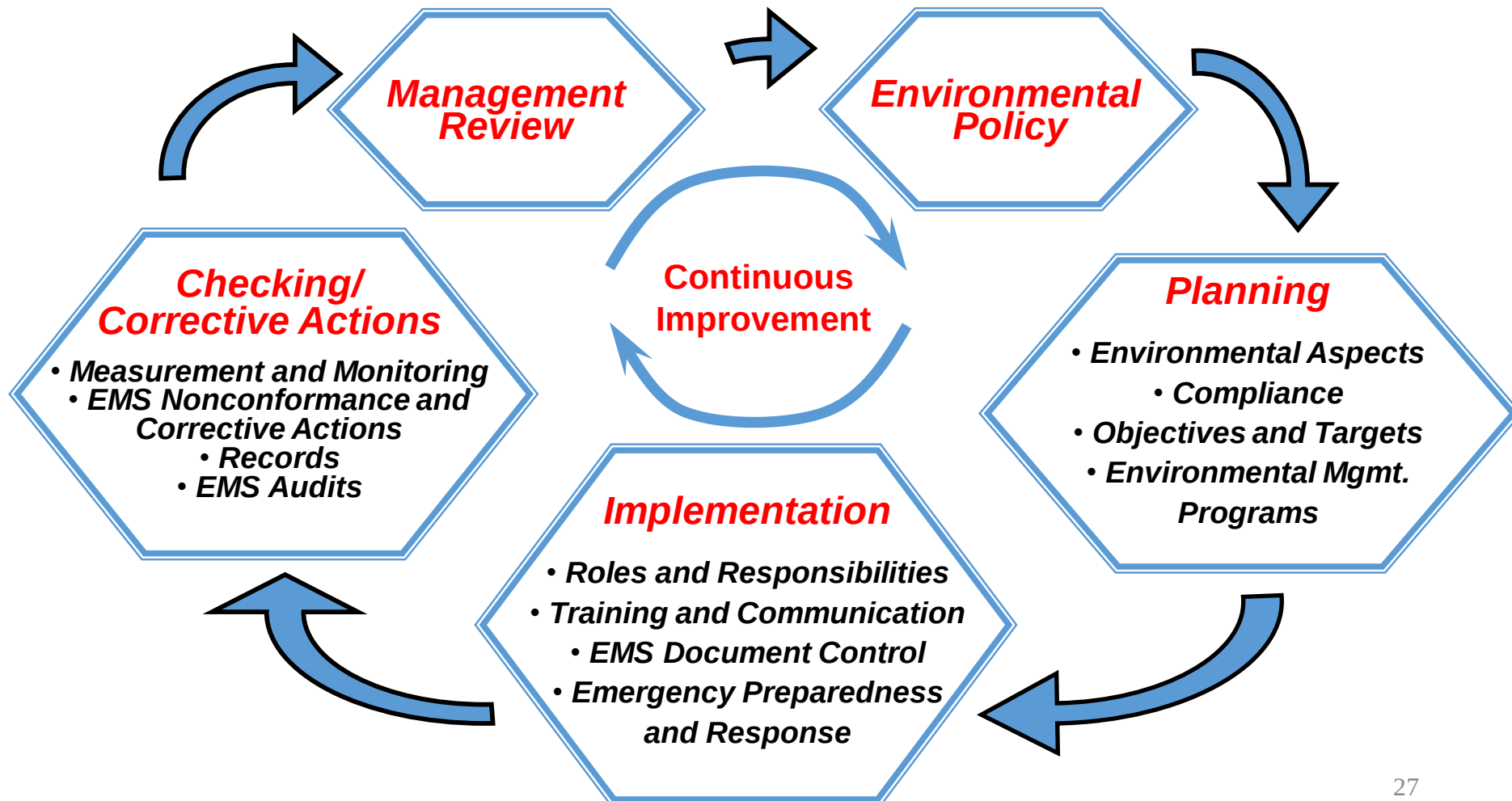
Implementation and Operation

- ✓ Define roles and responsibilities
- ✓ Provide EMS training
- ✓ Establish internal and external communication mechanisms
- ✓ Establish document control system
- ✓ Establish operational controls
- ✓ Integrate with or establish emergency preparedness procedures

Checking and Corrective Action

- ❖ Conduct periodic monitoring of environmental performance
- ❖ Identify root causes of findings and conduct corrective and preventive actions
- ❖ Maintain environmental records
- ❖ Conduct periodic EMS audit

ISO 14001 Elements



Other ISO 14001 Terms

- ✓ **Registration** - An external audit of an EMS for conformance with ISO 14001 by an entity certified in the US by Registrar Accreditation Board (RAB)
- ✓ **Registrar** - Entity that conducts external audit of EMS for registration
- ✓ **Conformance** - Adherence to ISO 14001 standard measured externally or internally
- ✓ **Self-Declaration** - An assertion by an organization that it is in conformance with the ISO 14001 standard based on an internal audit of its EMS

Benefits of an EMS

- ✓ Helps maintain compliance
- ✓ Reduce operating costs
- ✓ Integrate environmental programs into mission
- ✓ Increase employee involvement
- ✓ Reduce environmental impacts