

# An ISO 14001 Overview

## A process for improvement

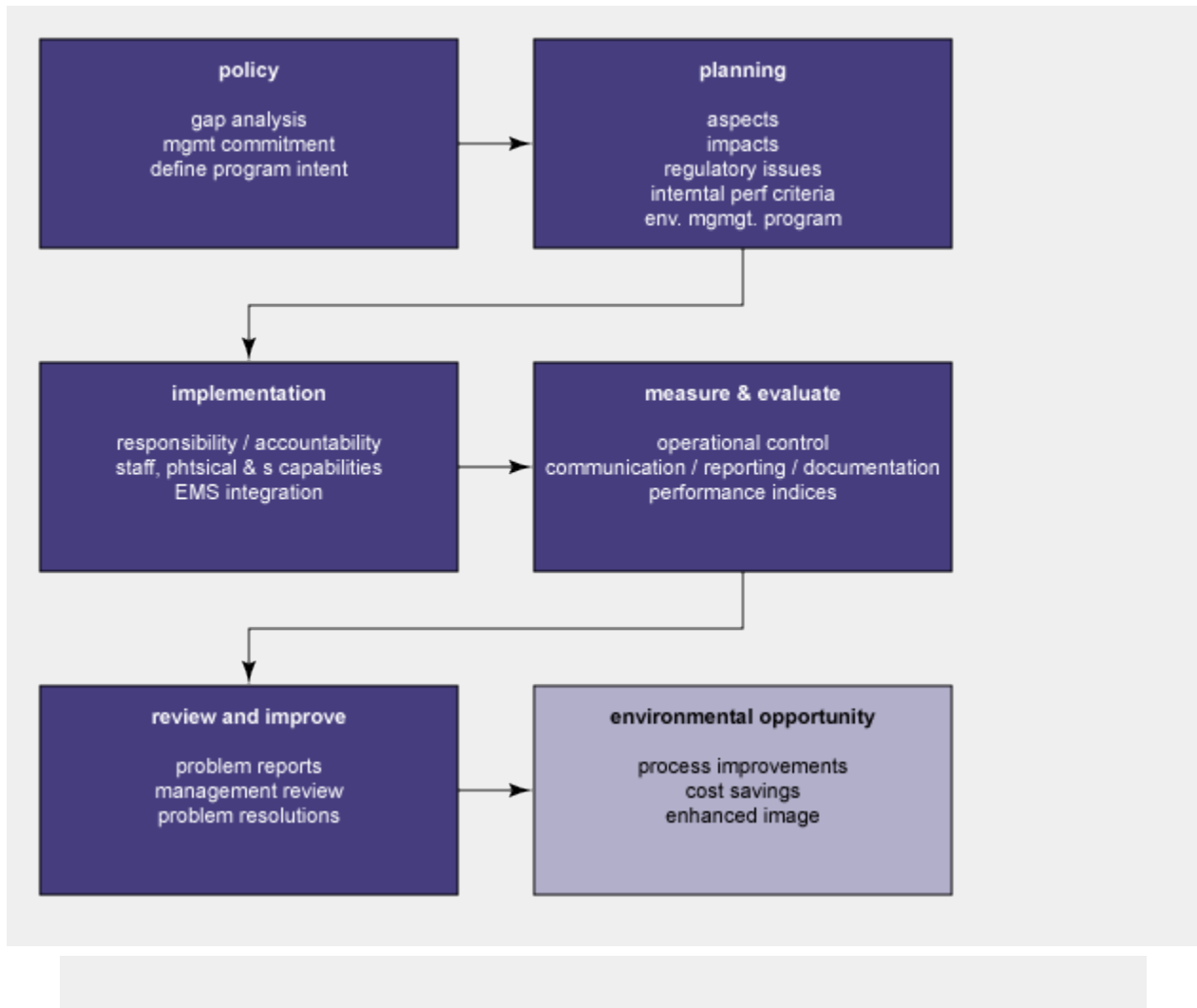
ISO 14000 is a group of standards, all of which relate to dealing effectively with environmental responsibility:

- Environmental Management Systems (14001, 14002, 14004)
- Environmental Auditing (14010, 14011, 14012)
- Evaluation of Environmental Performance (14031)
- Environmental Labelling (14020, 14021, 14022, 14023, 14024, 14025)
- Life-Cycle Assessment (14040, 14041, 14042, 14043)

Note that ISO 14001, an Environmental Management System, is a management standard, not a performance or product standard. Its underlying purpose is that companies will improve their environmental performance, but the document itself does not set any standards either for performance or the level of improvement. This is because ISO 14001 is actually a process for managing company activities that impact on the environment.

Although aiming at meeting environmental objectives, the process (Figure 1) is also intended to be an eventual source of success for the company.

Figure 1: The ISO 14001 process



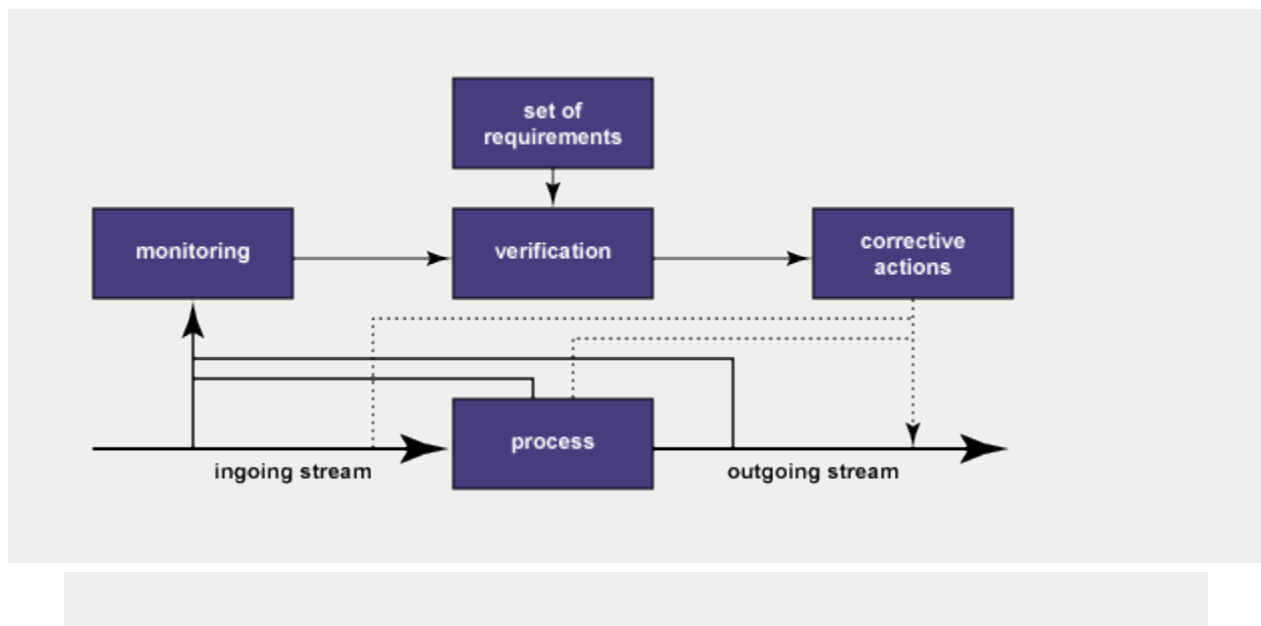
## A unique standard

ISO 14001 is at least unusual, and arguably unique, in that it is:

- Comprehensive:
  - all members of the organization participate in environmental protection
  - the environmental management system (EMS) considers all stakeholders

- there are processes to identify all environmental impacts
- Proactive, focusing on forward thinking and action instead of reacting to command and control policies.
- Based on a systems approach, stressing improving environmental protection by using a single EMS across all functions of the organization.

**Figure 2: A systems view of ISO 14001**



This systems approach, where the process is observed and assessed against agreed standards, and appropriate corrective action is taken, is a recurring theme in electronics and quality. However, in most cases feedback comes from the output, and is used to correct the process, whereas in environmental management (Figure 2) both feedback and corrective actions affect all three areas, input, process and output.

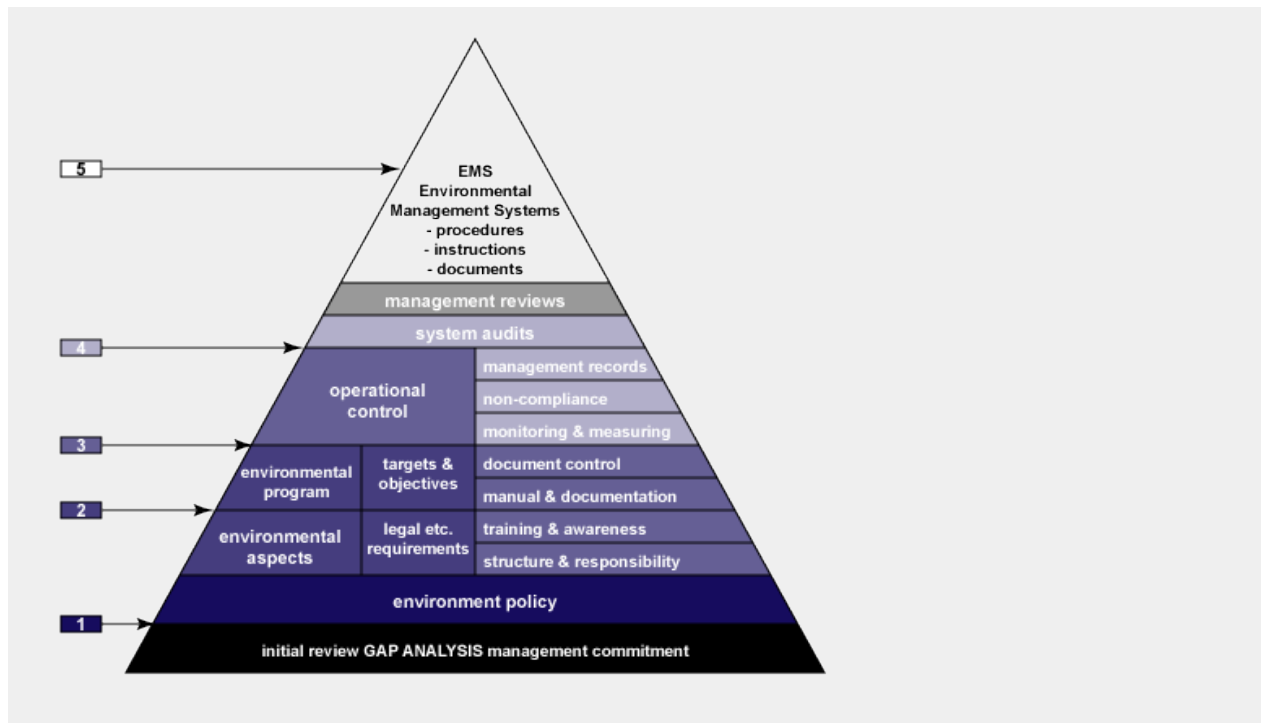
## EMS elements

An ISO 14001 approved company must have:

- an environmental policy supported by top management
- environmental goals, objectives, and targets that support the policy
- defined roles, responsibilities, and authorities
- an environmental management programme
- a process for communicating their EMS to all interested parties
- a program for auditing and corrective action

In order to exercise control, the company needs documented control of operations in accordance with the standard. As with ISO 9000, this has a multi-section structure (Figure 3):

**Figure 3: The structure of the ISO 14001 specification**



The company must also have reviewed all the environmental aspects, and identified both any significant impacts and the relevant legal and other requirements. Typically the audits follow the same broad outline as the topics covered by the EMS procedures.

Other significant activities in implementing ISO 14001 relate to:

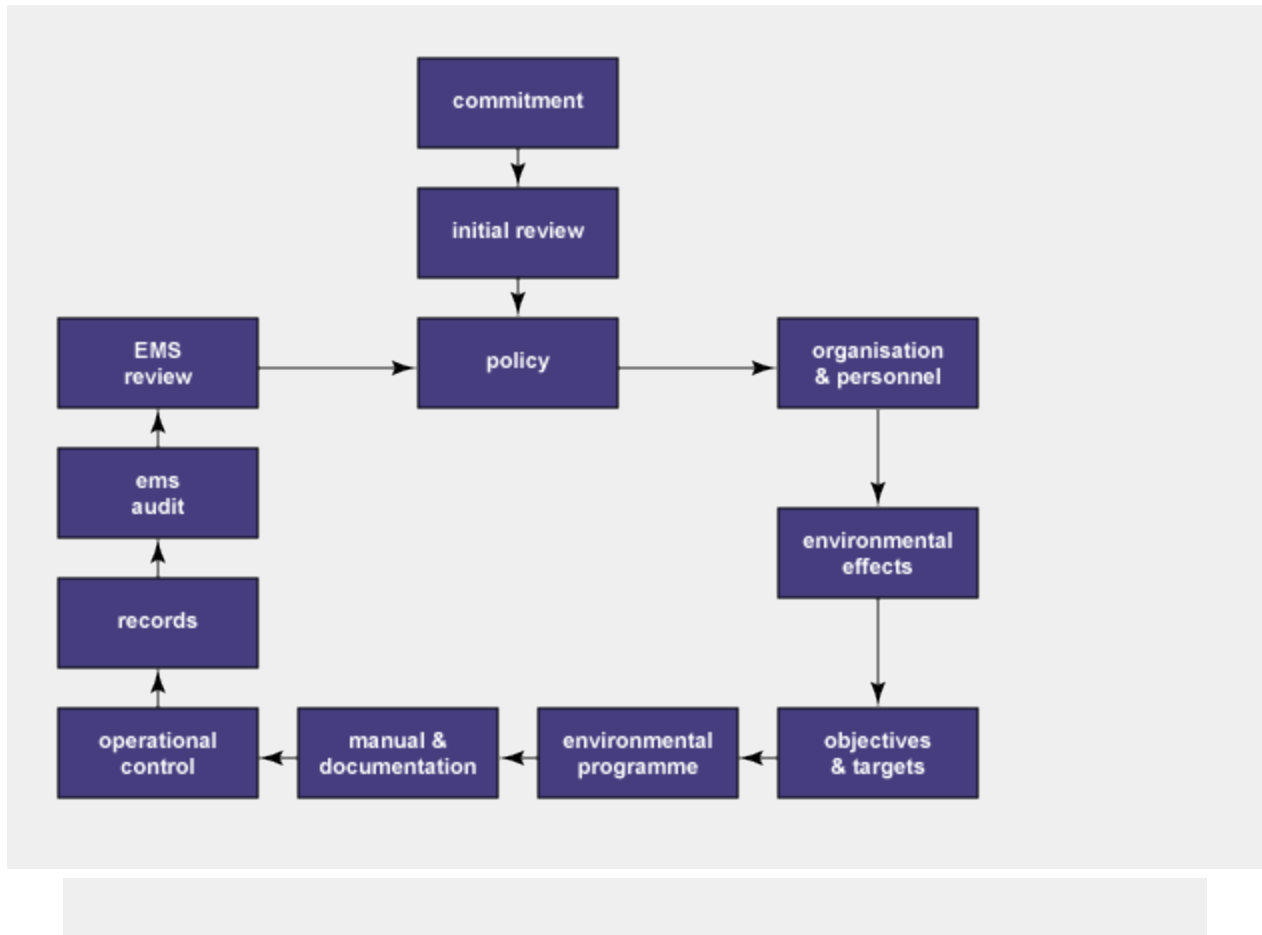
- training and awareness
- monitoring and measuring operations that can have a significant impact on the environment
- preparing a response for possible environmental emergencies
- correcting non-conformance
- audit and management review

### **The sequence of EMS implementation**

Figure 4 shows the importance of:

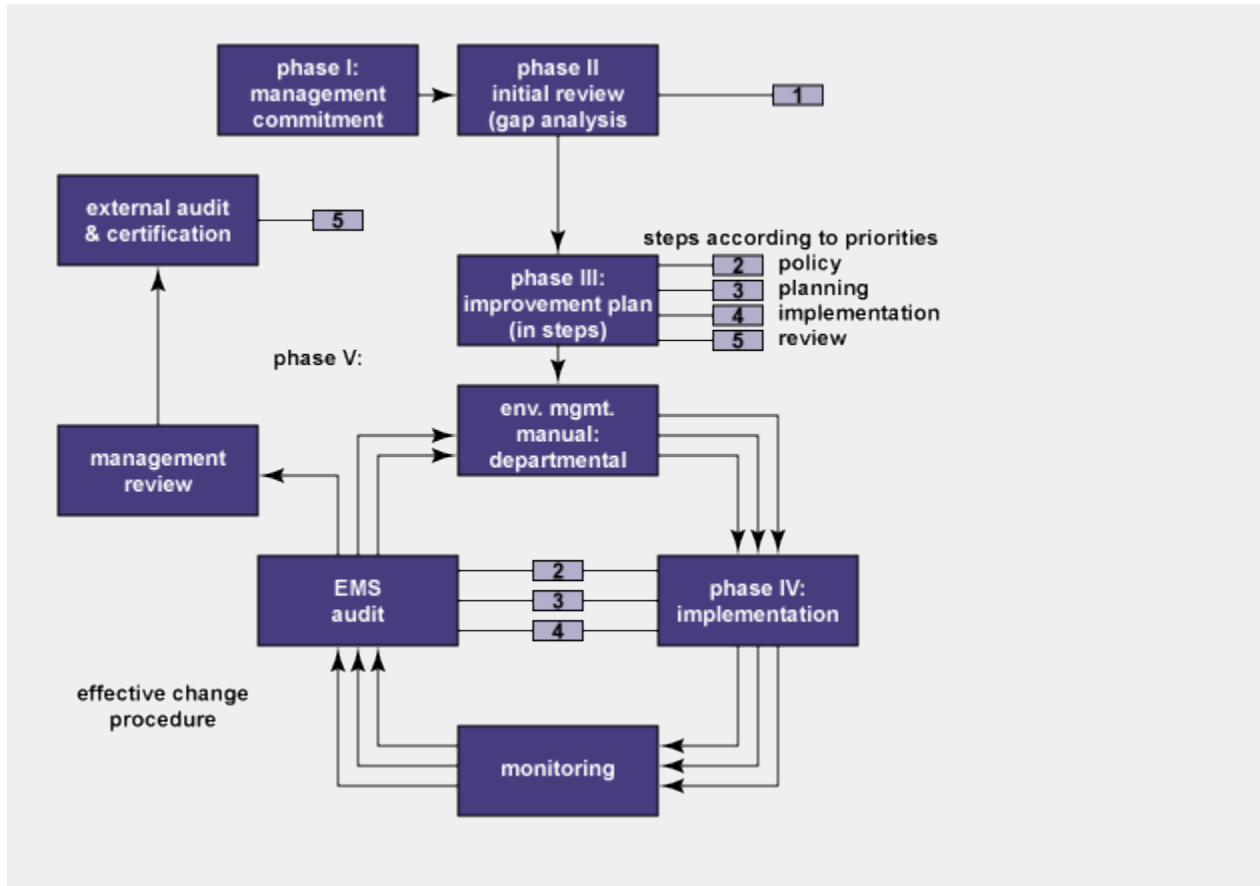
- a lead from the top
- continuing review and audit

**Figure 4: The sequence of EMS implementation**



In fact, as is emphasized in the alternative diagram in Figure 5, implementing an EMS is very much an iterative process.

Figure 5: The phases of EMS implementation



idea from: Martin 1998

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