

Environmental Management Systems

**How to use ISO Standards as a starting
point for improving your business and
achieving your organizations goals**



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Zero Waste Enterprises, In Partnership with greenUP!

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What is an EMS?

A documented management system to address applicable environmental regulatory requirements that includes organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing, and maintaining an environmental policy directed toward continuous improvement

EMS is NOT

- A collection of documents
- A program kept on a server
- A complex series of standards

What is an EMS?

A system that applies modern management techniques to environmental issues

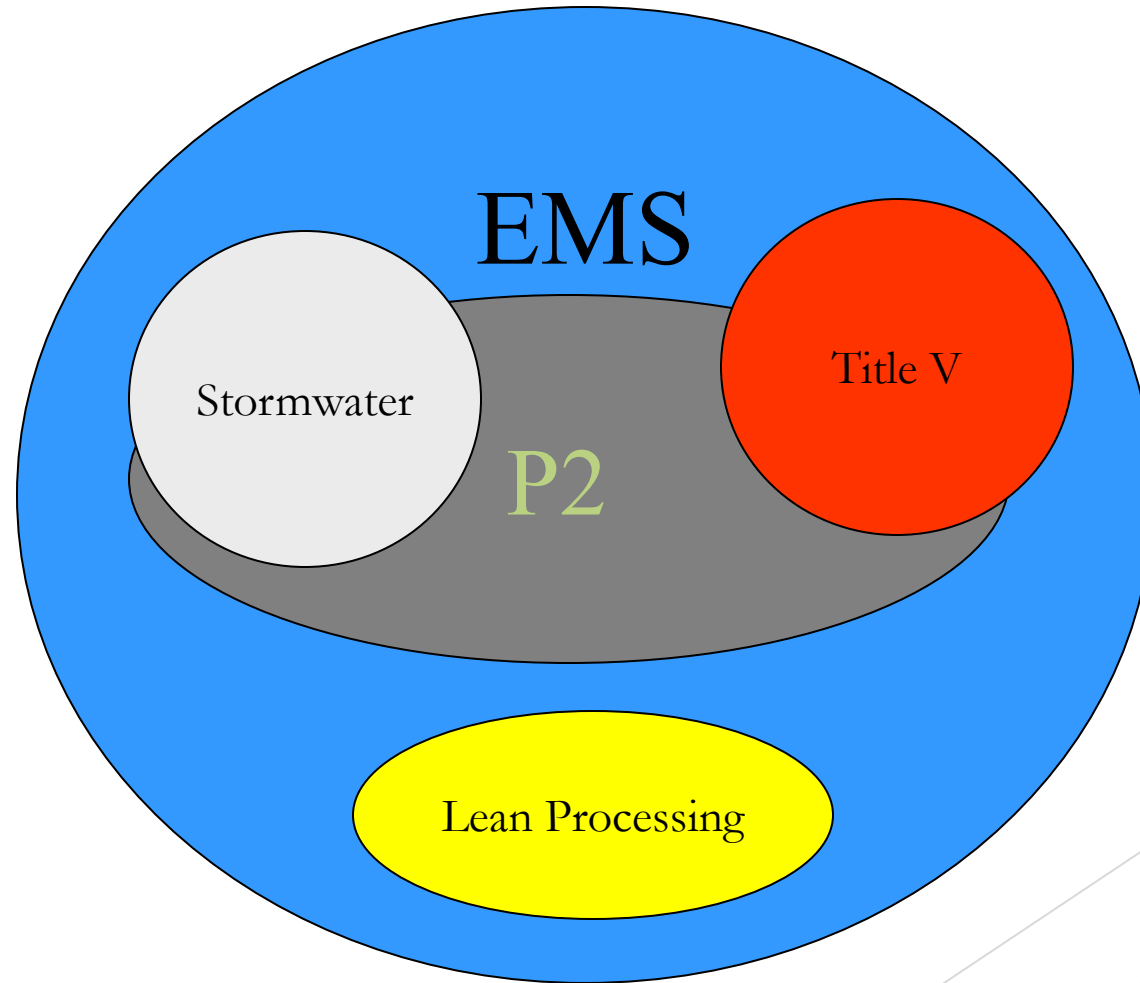
...and leads to inclusion of the environment in the mainstream business plan

...and integrates environment into every aspect of operations and level of organization--ownership

A Successful EMS Will

- ▶ Control risk
- ▶ Maintain compliance
- ▶ Reduce environmental impacts
- ▶ Forward the mission
 - ▶ Increased profits
 - ▶ Other purposes - e.g. improve healthcare quality for a hospital or readiness for a military unit.

EMS and Other Systems



ISO is NOT a Management System

ISO is a standard to measure the performance of a management system

Annex SL - Multiple Standards



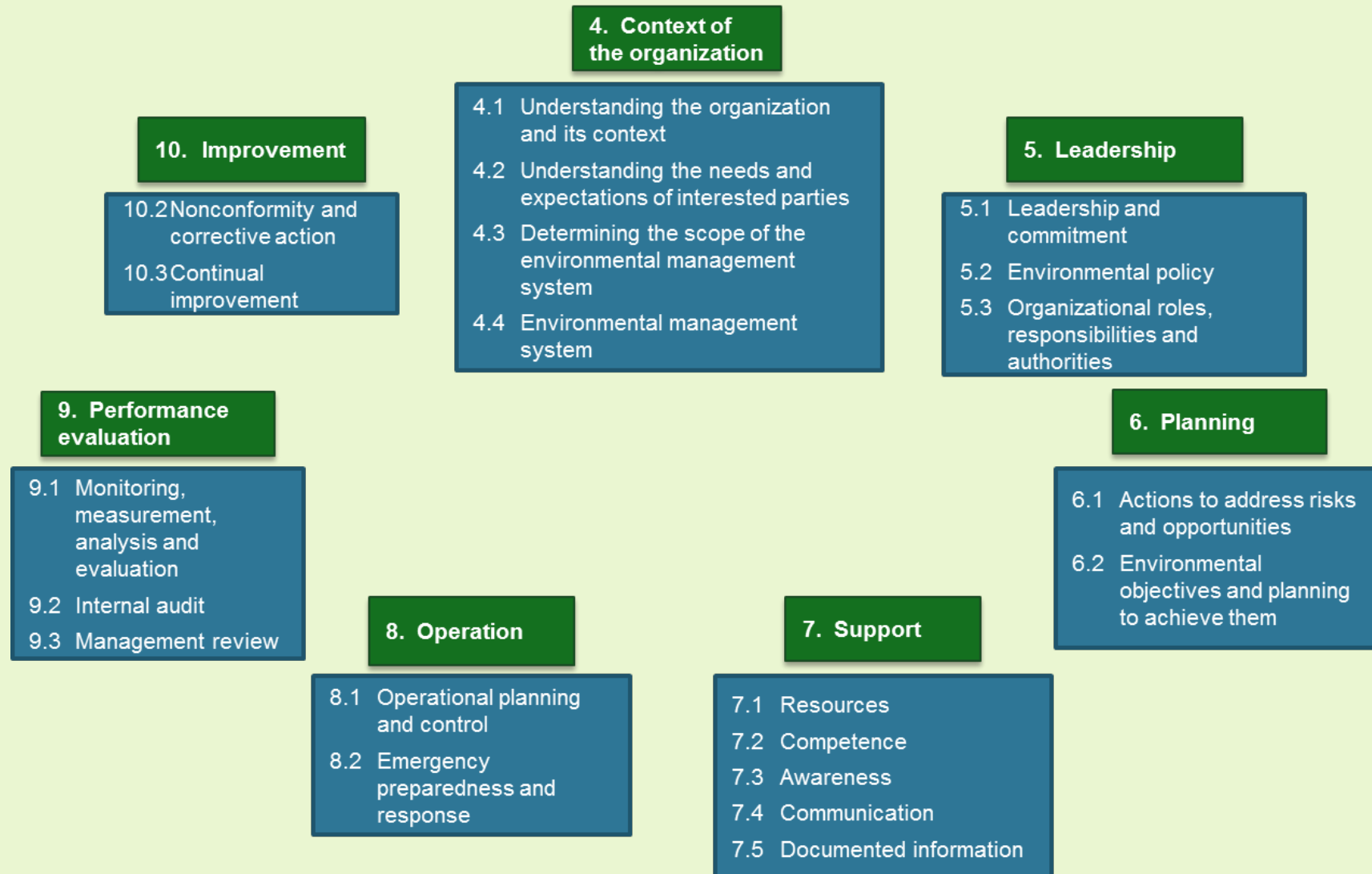
Common Core Foundation

All new ISO Standards and will follow this common clause layout.

Allows for multiple standards to be combined or aligned to prevent duplication.



ISO 14001 Aligned with Annex SL



Important things to consider



Environmental
Aspects



Environmental
Impacts



Significance

Environment

Surroundings in which an organization (your company, business, entity, etc.) operates, including air, water, land, natural resources, flora (plant life), fauna (animal life), humans, and their interrelation.

Environmental Aspect

Element of an organization's activities or products or services that can interact with the environment.

Environmental impact

ANY change to the environment,
whether adverse or beneficial, wholly
or partially resulting from an
organization's environmental aspects.

Significant

Significant environmental aspect - an environmental aspect that has or can have a significant environmental impact.

- ▶ Subjective - Not an exact science
- ▶ Not based on a complex formula
- ▶ What you determine as significant may not be significant in another organization
- ▶ Significance is how you set the course for lean and EMS

Significance

- ▶ Natural Resources Impact
- ▶ Cost
- ▶ Probability of Occurrence
- ▶ Volume
- ▶ Toxicity
- ▶ Regulated*
- ▶ Adverse Publicity
- ▶ Nuisance
- ▶ Human Health Impacts
- ▶ Frequency

Significance

- ▶ *If it's regulated, it's significant*
 - ▶ *Identifying regulatory requirements*
 - ▶ *Checklists*
 - ▶ *Assistance*

Global Reporting Initiative (GRI)

www.globalreporting.org



An international independent standards organization that helps businesses, governments and other organizations understand and communicate their impacts on issues such as climate change, human rights and corruption.

101: Principles for Report Content

- Stakeholder Inclusiveness

- Sustainability Context

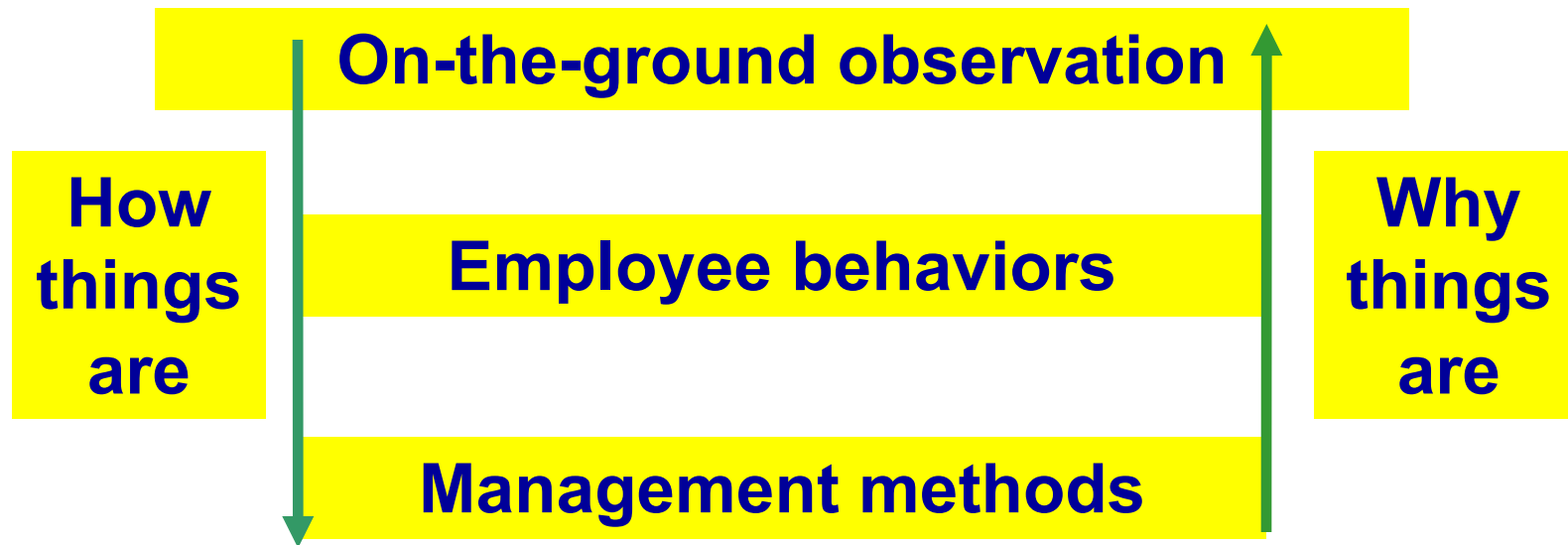
- Materiality

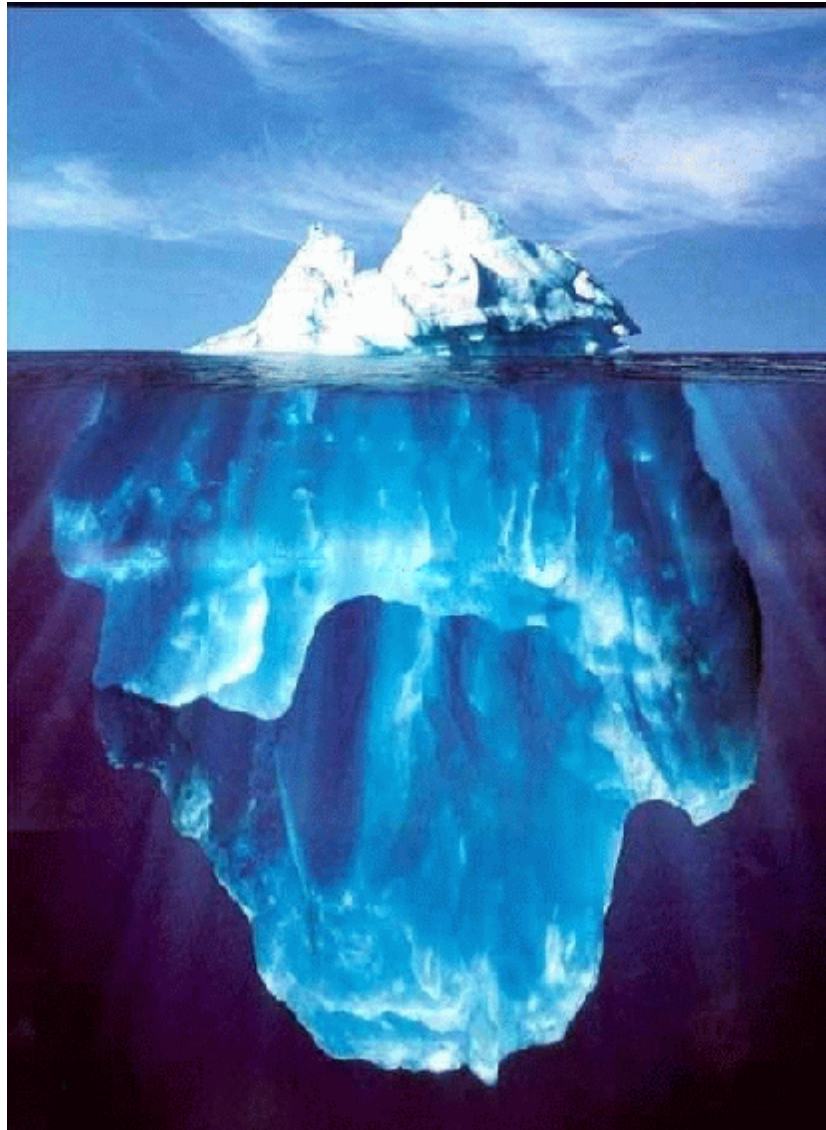
- Completeness

Audit Approaches and Findings

What you want to get from your auditor

Performance Based Audit Approach





← What you see

← What's going on
that makes what
you see happen

***EMS =
Performance.***

Changes to ISO

- Current ISO Standard Adopted 2015
- Applies to all current ISO certifications
- Main Changes
 - ▶ Risk-based thinking.
 - ▶ Top management commitment and involvement.
 - ▶ Context of the organization

Risk Based Thinking





Observation

- ▶ Employees not managing flammable Materials
- ▶ Chemicals going down drain



Management System Finding

- Productivity and quality has a strong system in place
- Systems to control these disappear after material is used in the process

EMS Issues

80% Cultural

20% Technical

Environmental Policy

- ▶ Determines Management Commitment to the Environment
- ▶ All Issues Tied Back to Policy
- ▶ Must be Distributed and Communicated To All Levels of Staff
- ▶ Understanding of Level of Commitment

That means it must be understandable

Success Story - Chempruf Door

Brownsville, Texas



- ▶ Recycle Spent Acetone
 - ▶ Recycle 2000-3000 gallons
 - ▶ Save \$3000 per year

Policy in Action

Waste nothing; find a use for everything.

- Bill Pitts, Founder Chempruf Doors

FOUR SIGNS OF A WORLD CLASS WORK PLACE

1. **SIFTING & TRASHING**: DECIDING WHAT IS
AND IS NOT NEEDED
2. **SORTING**: A PLACE FOR EVERYTHING
AND EVERYTHING IN ITS PLACE
3. **SPIC & SPAN**: HANDLE PARTS SO AS NOT TO
DAMAGE WITH DIRT, OIL, OR METAL
PARTICLES
4. **SWEEPING & CLEANING**: CLEAN JOB SITE
AT ALL TIMES MAKES WORK EASIER
AND SAFER

Other Changes

- Life Cycle Analysis
- Formal inclusion of Pollution Prevention
- Context

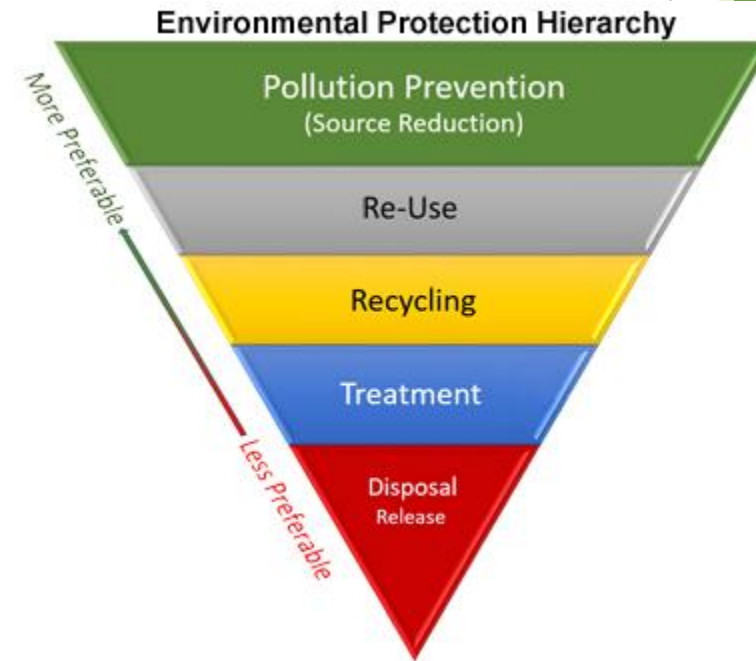
Life Cycle Analysis

- ▶ **Life cycle** - consecutive and interlinked stages of a product (or service) system, from raw material acquisition or generation from natural resources to final disposal.



What is Pollution Prevention (P2)?

- ▶ Pollution Prevention
- ▶ is a method of analyzing and modifying processes and inputs
- ▶ in an effort to minimize non-product outputs.



Context

- ▶ The internal and external issues that can impact its strategic objectives and the planning of the EMS.
 - What new political issues are arising
 - Scientific research
 - Community Attitudes
 - Market availability
 - Impact of resources