

Environmental Management System Implementation

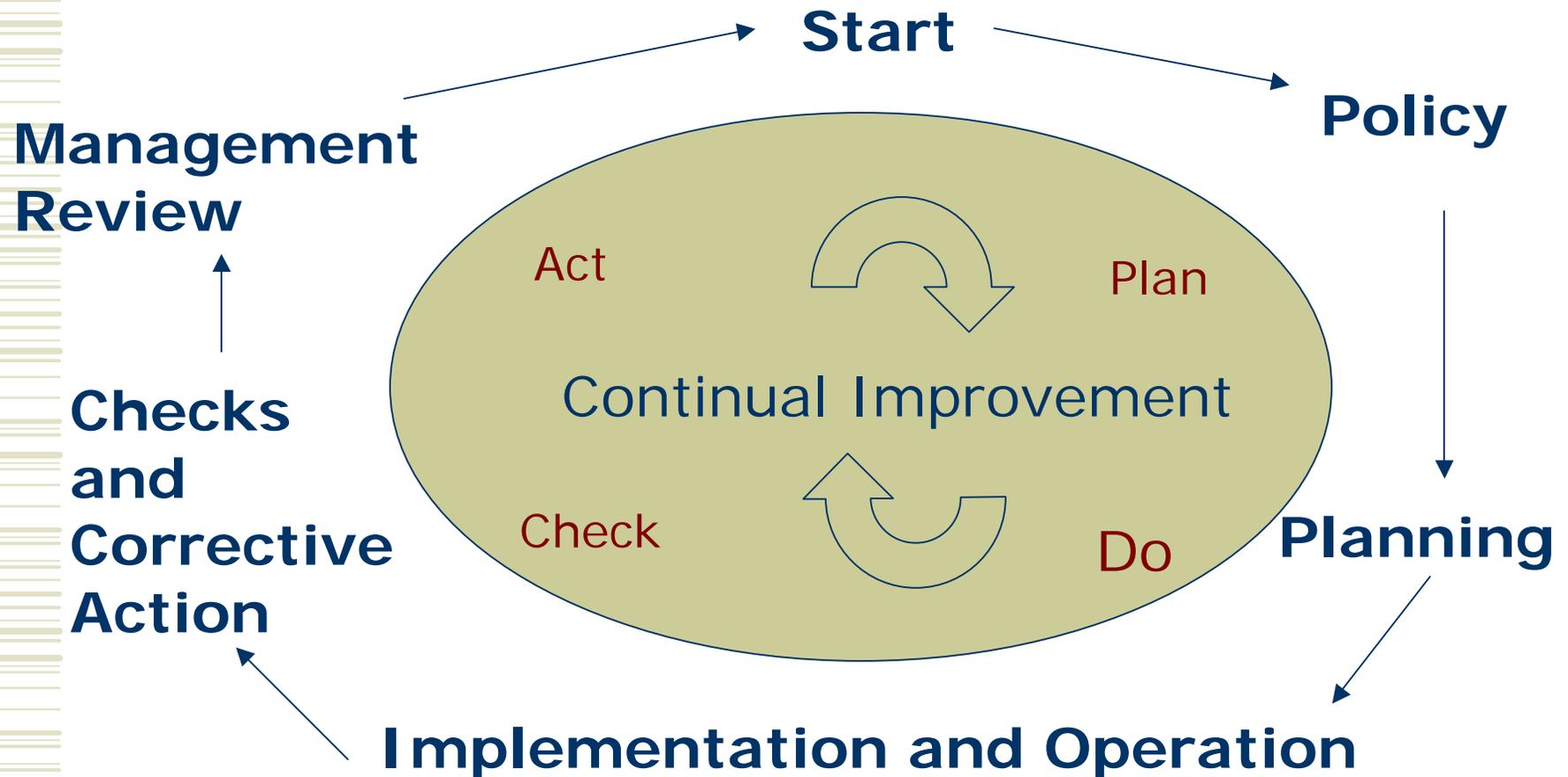
**EPA's Environmental Science Center
Ft. Meade, MD**

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**Maryland Pollution Prevention
Partnership November 5, 2003**



Environmental Science Center EMS EMS Overview



Environmental Science Center EMS

The EMS Backbone: Aspects-Impacts-Targets-Objectives

EMS implementation begins with the question “**Which of our activities impact the environment ?**”

Specific environmental aspects and impacts are analyzed.

Objectives and Targets (performance improvement goals) are set for significant aspects.



Environmental Science Center EMS Identified Environmental Aspects

✍ Air Emissions

✍ Fuel Consumption
(Gas/Oil)

✍ Electricity
Consumption

✍ Fuel/Emissions Mobile

✍ Chemical Resources

✍ Radiation

✍ Paper Consumption

✍ Water Consumption

✍ Wastewater Discharge

✍ Waste Generation

✍ Storm water

✍ Noise

✍ Microbial
Contamination



Environmental Science Center EMS Aspect: Paper Consumption

Aspect: Paper Consumption

Objective

 Develop strategy to reduce paper consumption

Target

 Collect baseline data on paper consumption



Environmental Science Center EMS Worldwide ISO 14001 Registrations

✍ **ISO 14001 published September 1996**

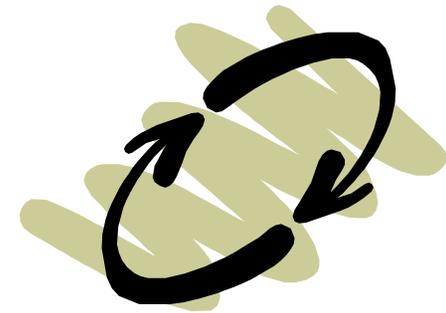
✍ **Current registrations:**

✍ **47,000 worldwide**

✍ **1,900 in US**

✍ **Expected to follow course of ISO 9001
registrations – several hundred thousand
worldwide**

(<http://www.ecology.or.jp/isoworld/english/analy14k.htm>)



Environmental Science Center EMS US Government Context

- ✍ Executive Order 13148 mandates EMS by '05
- ✍ Fewer than 20 federal facilities are registered to ISO 14001
- ✍ OMB, CEQ, OFEE and EPA strongly supporting EMS in federal facilities



Environmental Science Center EMS Implementation Timeline



✍ Occupancy February
1999

✍ EMS start January '00

✍ Vital Statistics

✍ 145,00 gross square
feet, 89,000 net usable

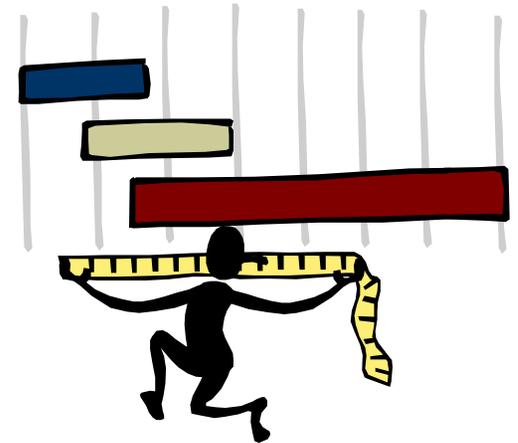
✍ 70 laboratories

✍ 165 occupants

EMS Implementation at the ESC

Timeline 1 of 2

- ✍ First 8 months of 2000 was project enablement period - Consultant Procurement, EMS Team Formation, Policy Statement
- ✍ Detailed implementation began September 2000 with EMS Team Meetings, Awareness Training, Implementation Training, and ESC EMS Policy



EMS Implementation at the ESC

Timeline 2 of 2

- ✍ October 2000 through March 2002
(17 months) all elements of Planning
and Implementation/Operation
completed
- ✍ Internal Audit June 2002
- ✍ Management Review July 2002
- ✍ Registration Phase 1 August 2002
- ✍ Registration Phase 2 September 2002



EMS Implementation at the ESC Costs

Dollars

- ✍ Two different implementation-assistance contracts with total value = \$80 K
- ✍ Registration contract = \$15 K

People

- ✍ EMS Coordinator 0.7 FTE/yr
- ✍ EMS Team – $9 \times (0.05) = .45$ FTE/yr
- ✍ Awareness Training 4hrs all occupants
- ✍ EMS Target Workgroups = 500 hrs. for all



Environmental Science Center EMS

Return on Investment

- ✍ Increased awareness of environmental performance
- ✍ Cross-facility coordination
- ✍ Group synergy/learning
- ✍ Aware of our entire environmental footprint
- ✍ Cultural change has begun
- ✍ Better organized documents and records



Environmental Science Center EMS Internet Site

www.epa.gov/region3/esc/ems.htm



ESC EMS – The Way It Won't Be



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