

# Environmental Management System Implementation

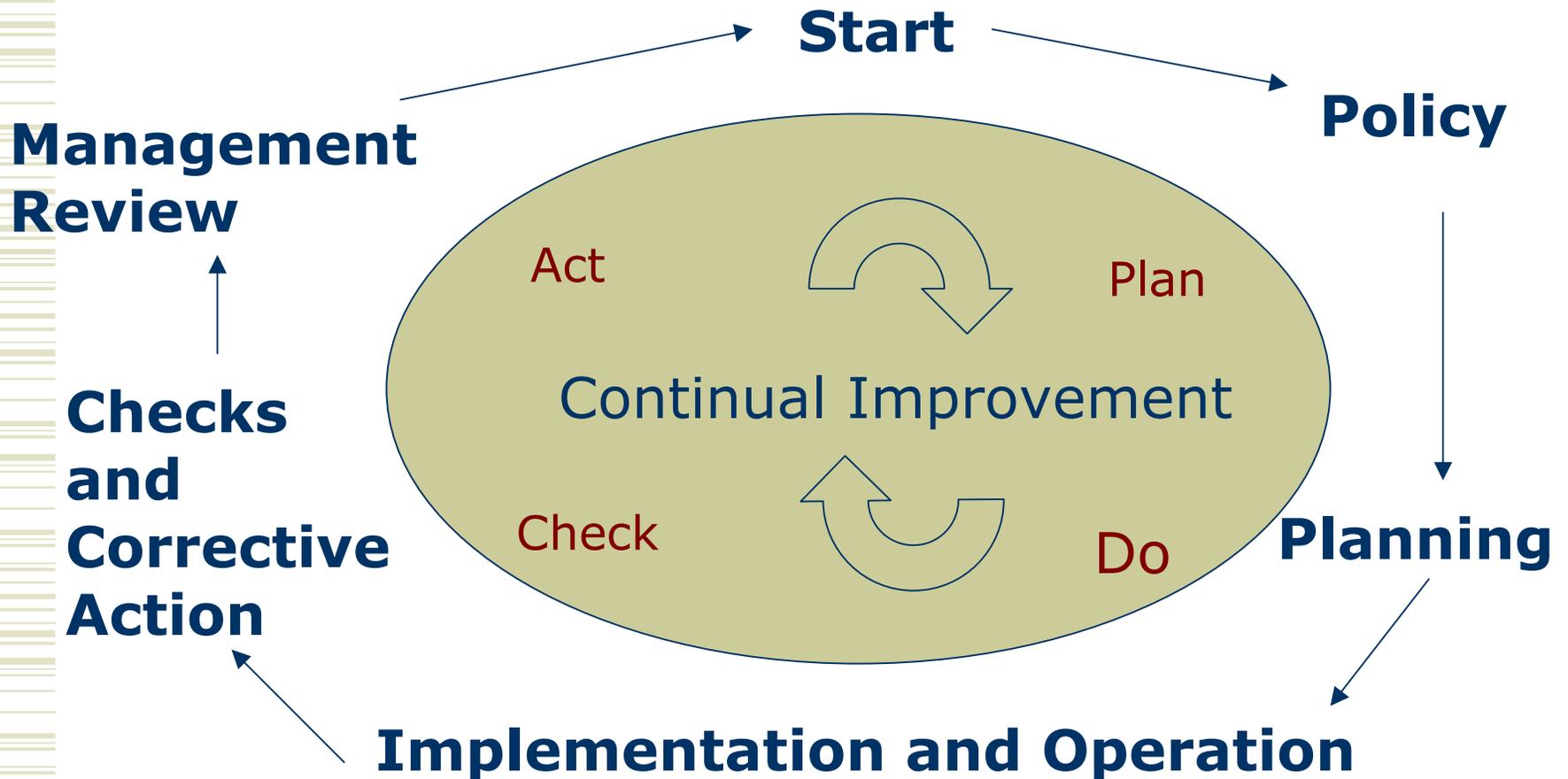
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Maryland Pollution Prevention  
Partnership November 5, 2003**



# 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



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# Environmental Science Center EMS Worldwide ISO 14001 Registrations

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- ◆ **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

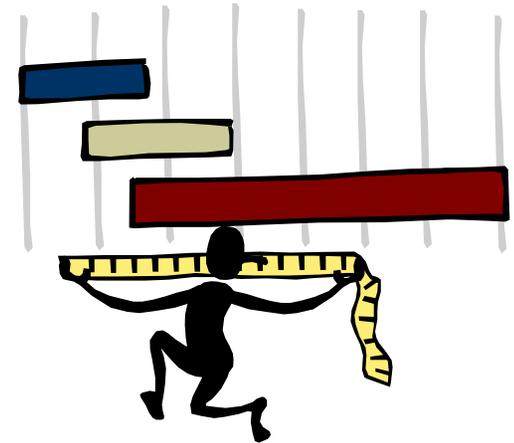


- ◆ Occupancy February 1999
- ◆ EMS start January '00
- ◆ Vital Statistics
  - 145,00 gross square feet, 89,000 net usable
  - 70 laboratories
  - 165 occupants

# 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



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# Environmental Science Center EMS Internet Site

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[www.epa.gov/region3/esc/ems.htm](http://www.epa.gov/region3/esc/ems.htm)



# ESC EMS – The Way It Won't Be



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