

The logo for the Environmental Management System, featuring a stylized sun with rays and a central globe with recycling symbols.

Environmental Management System

# Integrating Safety and Security into the EMS Life Cycle: A Body Contact Sport

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# Why Integrate Environment, Safety & Security

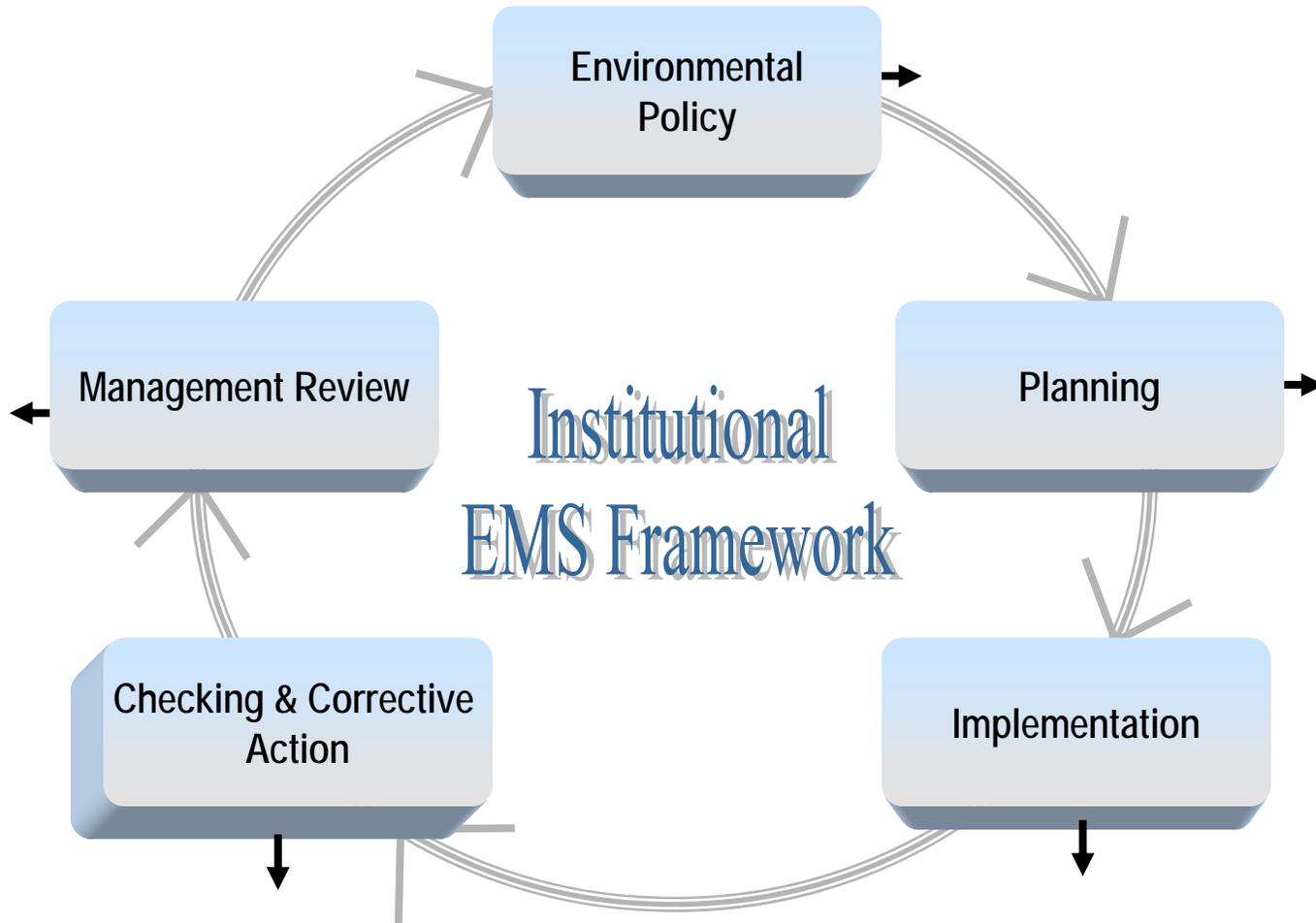
- DOE Order 450.1-4 requires sites to have an EMS *and* integrate the EMS with ISMS
- Internal and external audits indicate that integration is not systematic
  - Document hierarchies consistent but workers see safety, security & environment as separate systems
- Opportunities exist to leverage safety, security and environmental programs for mutual benefit
- Streamlining multiple requirements eases the burden on all systems



# LANL EMS Approach

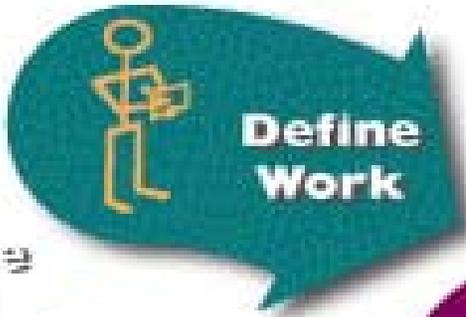
- Bottoms-up design with Senior Mgmt Support
- Used the LANL culture
  - Engaged Divisions with most environmental issues to form Core Team
    - 43 people, 15 Divisions on initial team
    - ISO 14001 certification training for Core Team
    - ISO 14001 Audit training for Core Team
  - Listened to and incorporated feedback
- ISO 14001:2004 Used as Standard
- Integration with safety, security and other Lab programs from the inception

*Safety for You, Security for the Nation, Environment for our Future*



**Safety for You  
Security for the Nation  
Environment for Our  
Future**

1. Identify work activities that interact with the environment



2. Identify environmental impacts



3. Develop controls to prevent significant environmental impacts



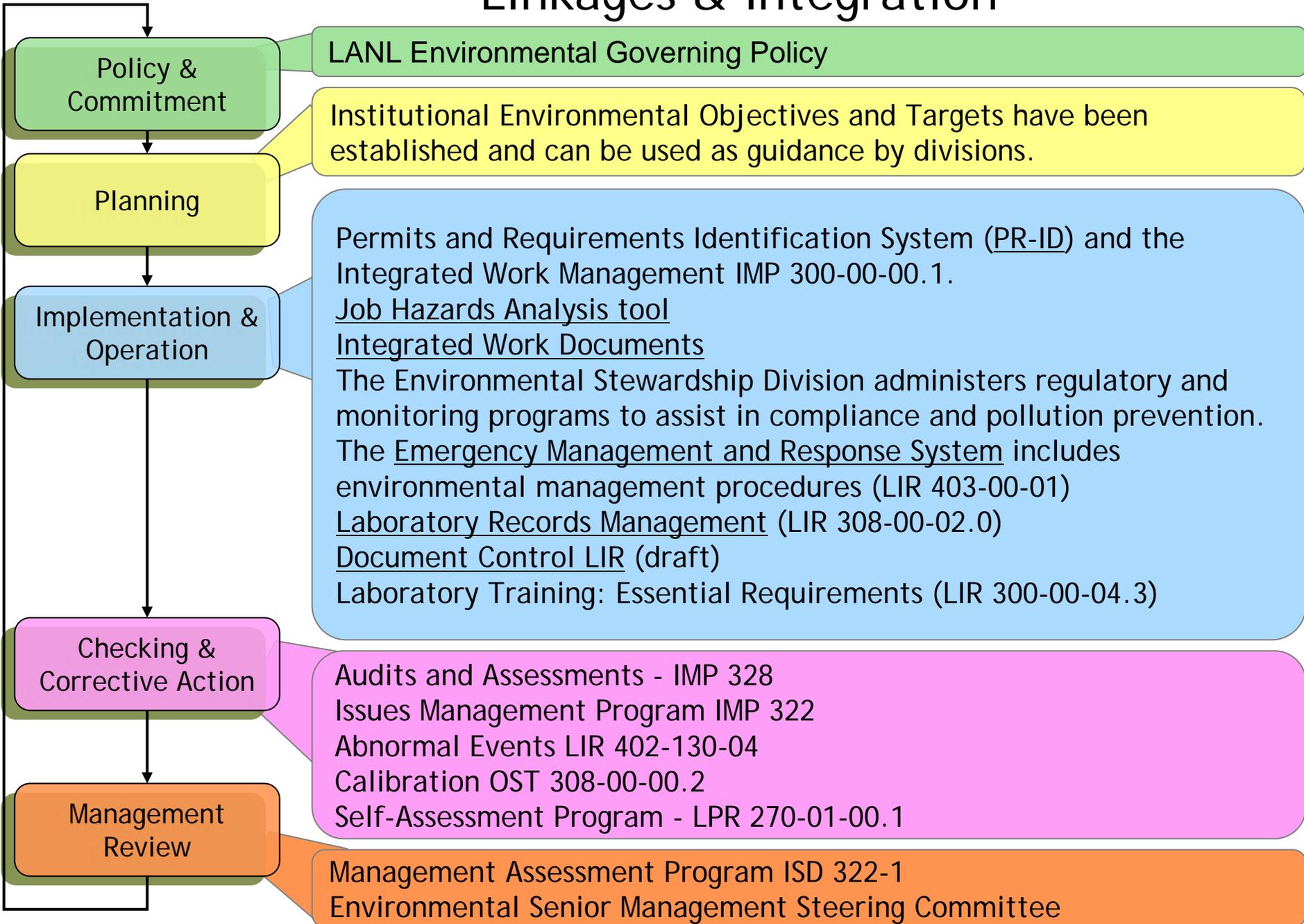
4. Do the work according to procedures (e.g. environment, security, safety, etc).



5. Feedback & improvement



# Linkages & Integration





# One Work Message Built into Communications Tools



*Safety for You, Security for the Nation, Environment for our Future*

- No separate work control system for environment
  - Built SME process into Job Hazard Analysis tool
    - Audits finding little worker use
  - Upgraded PR-ID tool and made use a requirement for new and modified work (IPP 400.1)
    - Includes security and engineering checks
- Lab-wide environmental awareness training includes safety and security messages
- Joint awareness messages
  - Environment, Safety & Security Posters
  - LINKS messages
- Inclusion in Lessons Learned Program overhaul
  - Prevention as a Lesson Learned





# EMS Integration Actions

- Chemical Management System support
  - Life Cycle Chemical Management initiative
    - Environmental High Risk Chemicals/Alternative Project
    - 80%+ recycle rate on surplus chemicals for inventory PBI
  - “Canned Air” Campaign with IH and ASM
- Equipment and Materials Disposition Program
  - Problem crosses institutional lines
    - Safety, security, procurement, HR, waste disposition, salvage, etc.
    - Working group reflects these interests
  - Toolkit approach condenses lessons learned for field use
  - Now addressing root causes
    - Departure process
- Safety and Security criteria included in P2 and GSAF Projects
  - Beryllium part replacement
  - Hydrodynamic test beryllium containment system improvement
  - TA-55 casting systems
  - Dissolvable Personal Protective Equipment with Rad Protection



# Next Steps

- EMS moving to 08 process with focus on worker level involvement
- Organizations including EMS in Worker Safety & Security Team process but need to make more systematic
- EMS WSST sub-committee established
- Joint response to HSS Audit findings
- Joint sponsor-ship of Lab-wide improvement initiatives:
  - Equipment and Materials Disposition Kaizen
  - Hazardous Materials Management Kaizen
  - Chemical Life Cycle Six Sigma Project