National Personal Protective Technology Laboratory

NIOSH PPT Program Action Planning

Maryann D'Alessandro
NPPTL Associate Director for Science
PPT Program Coordinator

NPPTL Public Meeting
December 2, 2008

NIOSH requested that the National Academies (NA) evaluate NIOSH's research programs with respect to their impact, relevance, and future directions.

- PPT Program is one of 8 NIOSH Programs reviewed
  - 3 Sector Programs Reviewed
  - 5 Cross Sector Programs Reviewed

- All NIOSH Programs are responding to Program Evaluation Recommendations
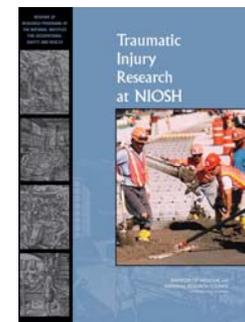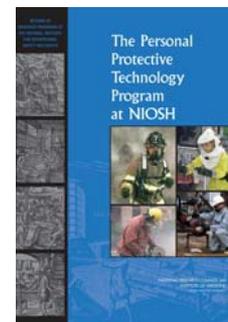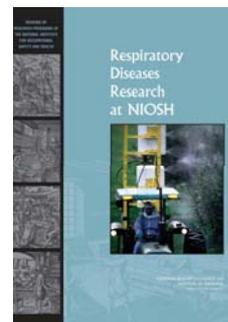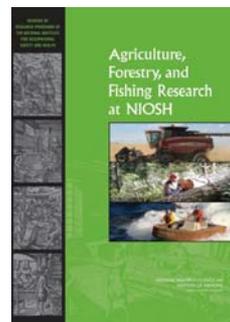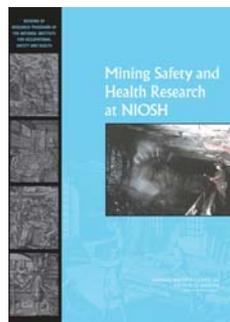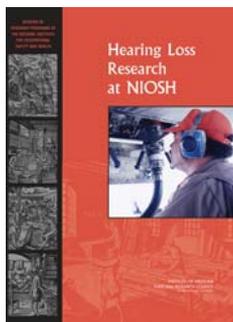
Who reviewed the PPT Program?

E. John Gallagher (Chair), Albert Einstein College of Medicine, Bronx, NY

Roger L. Barker, North Carolina State University, Raleigh

Howard J. Cohen, University of New Haven, CT

Janice Comer-Bradley, International Safety Equipment Association, Arlington, VA

Elizabeth A. Corley, Arizona State University, Phoenix

Richard M. Duffy, International Association of Fire Fighters, Washington, DC

James S. Johnson, JSJ and Associates, Pleasanton, CA

James M. McCullough, SRI International, Arlington, VA

Jimmy Perkins, University of Texas Health Science Center, San Antonio

David Prezant, New York City Fire Department; Albert Einstein College of Medicine, Brooklyn, NY

Knut Ringen, Independent Consultant, Seattle, WA

Emanuel P. Rivers, Henry Ford Hospital, Detroit, MI

Joseph J. Schwerha, University of Pittsburgh

Anugrah Shaw, University of Maryland, Eastern Shore

Tonya Smith-Jackson, Virginia Polytechnic Institute and State University, Blacksburg

Framework Committee Liaison
>   Susan Cozzens, Georgia Institute of Technology, Atlanta, GA

Board on Health Sciences Policy Liaison
>   Martha Hill, Johns Hopkins University, Baltimore, MD

From PPT Evaluation Presentation – June 25, 2008

What was reviewed?

PPT GOALS & OBJECTIVES	PPT DOMAINS		
	Research	Policy & Standards	Respiratory Certification
1. INHALATION			
1.1. Maintain national inventory of respirators			
1.2. CBRN			
1.3. Mine escape respirators			
1.4. Anthropometrics			
1.5. Viral transmission/pandemic preparedness			
1.6. Nanotechnology			
1.7. ESLI			
1.8. Respirator use in the workplace			
2. DERMAL			
2.1. Chemical barrier protective clothing			
2.2. Emergency responder protective clothing			
2.3. Ergonomics of protective ensembles			
3. INJURY			
3.1. Warning devices for fire services			

From PPT Evaluation Chair Framework Committee Presentation – Nov 24, 2008

CDC **Workplace Safety and Health** NIOSH

How was the Program reviewed?

12 OBJECTIVES

3 DOMAINS

12 x 3 =   36 cells/level
36 x 4 = 144 cells total

RELEVANCE (scale of 1 to 5)

IMPACT (scale of 1 to 5)

EMERGING ISSUES

RECOMMENDATIONS

From PPT Evaluation Chair Framework Committee Presentation – Nov 24, 2008

Workplace Safety and Health

CDC   NIOSH

Overall Assessment of Relevance and Impact

Relevance Score= 4

PPT program is working in priority areas and is engaged in transferring its research into improved products and processes.

Impact Score= 4

The PPT program has made some meaningful contributions to both intermediate outcomes and, to a lesser extent, end outcomes.

What was recommended?

Each NA recommendation and each associated issue is addressed separately and summarized in an overall report.
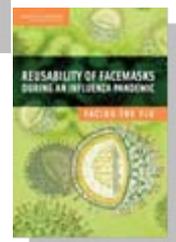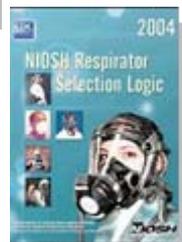
Comprehensive National PPT Program

Centers of Excellence
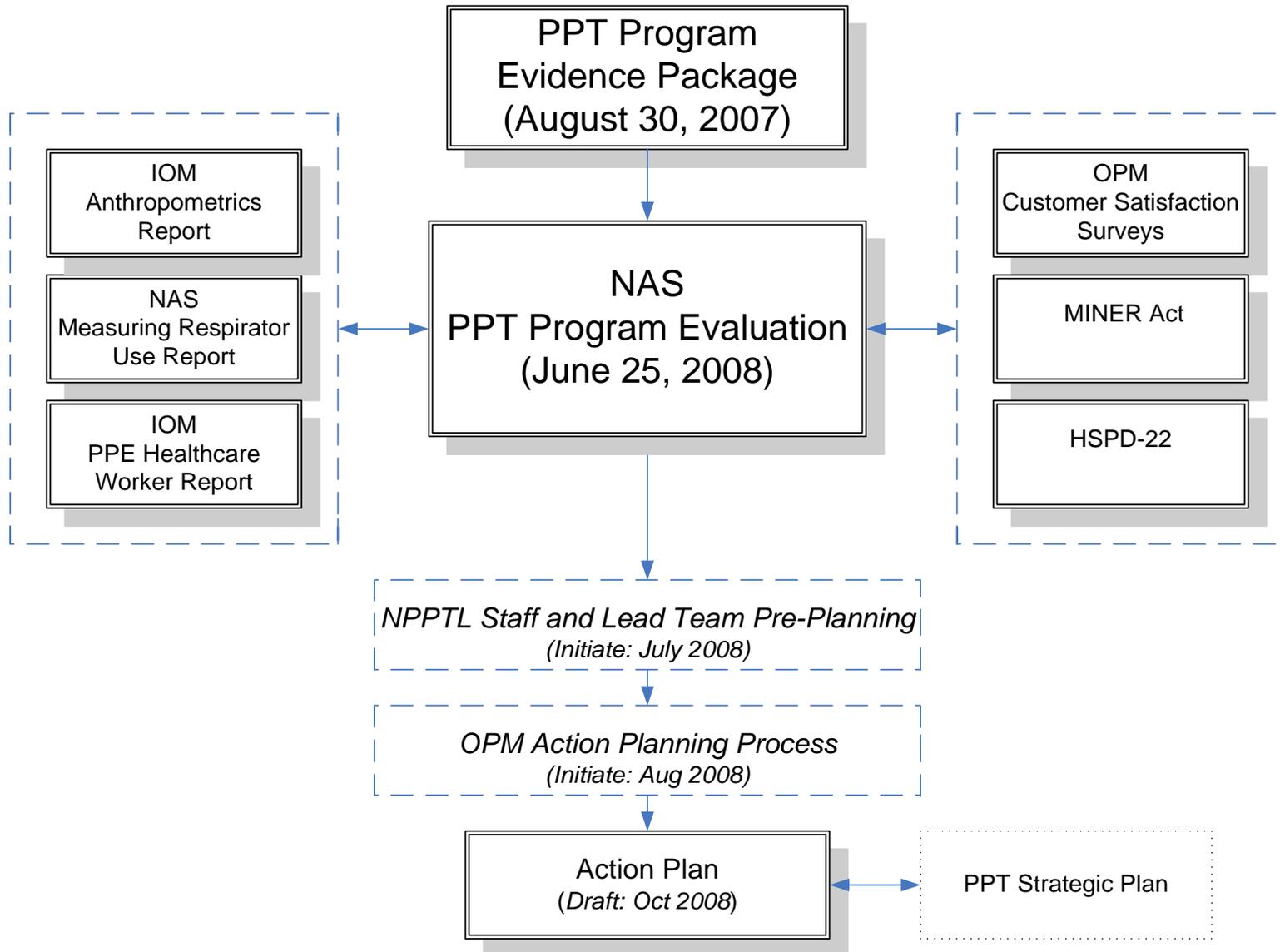
Enhanced Respirator Certification Program

Research on use and usability of PPE

Assess PPT use and effectiveness using a lifecycle approach

How is PPT Program addressing the recommendations?

ACTION PLAN DEVELOPMENT

```
                    ┌─────────────────────┐
                    │    PPT Program      │
                    │  Evidence Package   │
                    │  (August 30, 2007)  │
                    └─────────────────────┘
                              │
                              ▼
┌─────────────────┐   ┌─────────────────────┐   ┌─────────────────────┐
│      IOM        │   │                     │   │        OPM          │
│ Anthropometrics │   │        NAS          │   │ Customer Satisfaction│
│     Report      │   │ PPT Program Evaluation│ │      Surveys        │
├─────────────────┤   │   (June 25, 2008)   │   ├─────────────────────┤
│      NAS        │◄─►│                     │◄─►│     MINER Act       │
│Measuring Respirator│ │                     │   ├─────────────────────┤
│   Use Report    │   │                     │   │      HSPD-22        │
├─────────────────┤   └─────────────────────┘   └─────────────────────┘
│      IOM        │             │
│  PPE Healthcare │             │
│  Worker Report  │             │
└─────────────────┘             ▼
                    ┌─────────────────────────────────┐
                    │ NPPTL Staff and Lead Team Pre-Planning │
                    │      (Initiate: July 2008)      │
                    └─────────────────────────────────┘
                              │
                              ▼
                    ┌─────────────────────────────────┐
                    │   OPM Action Planning Process   │
                    │      (Initiate: Aug 2008)       │
                    └─────────────────────────────────┘
                              │
                              ▼
                    ┌─────────────────┐        ┌─────────────────────┐
                    │   Action Plan   │◄──────►│  PPT Strategic Plan │
                    │ (Draft: Oct 2008)│        └─────────────────────┘
                    └─────────────────┘
```

NIOSH PPT Program established a hierarchy to address the National Academies' recommendations.

Recommendation

⬇

Issues and Desired Outcomes

⬇

Activity Output Goals

⬇

Action Steps
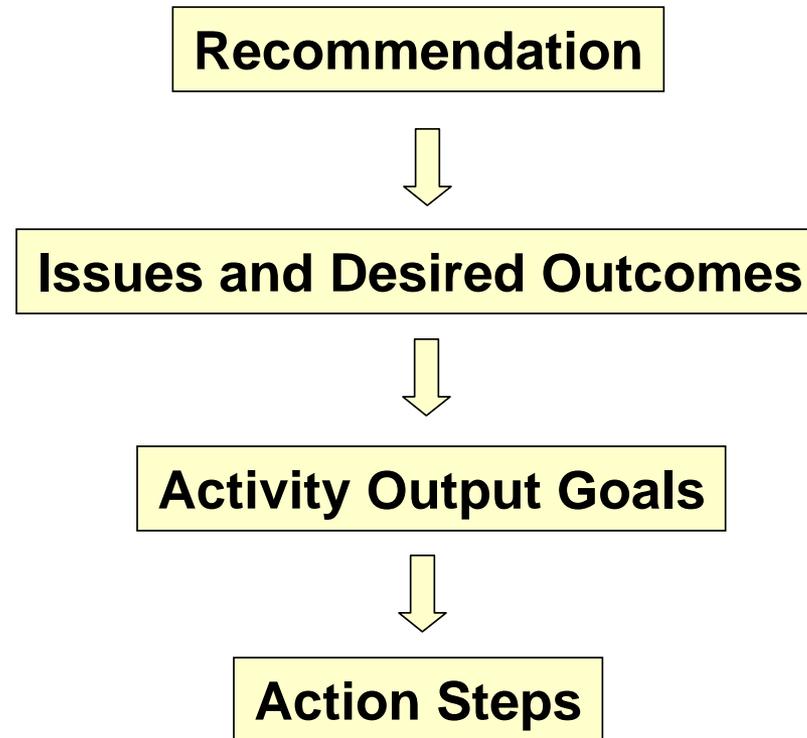
The hierarchy aligns with the NIOSH Program Portfolio planning and provides a comprehensive approach for moving the program forward.
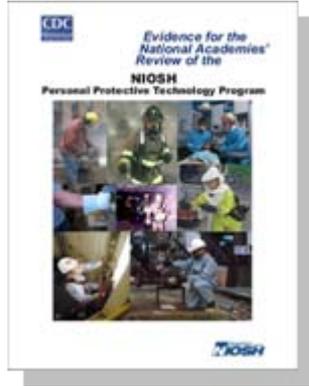
Recommendation 1: Implement and sustain a comprehensive National Personal Protective Technology program

Issue 1.1: Manage and conduct research across all types of PPT and across all occupations and workplaces.

Issue 1.2: Participate in policy development and standards setting across all types of PPT.

Issue 1.3: Oversee certification of all PPT, including an assessment of certification mechanisms.

Issue 1.4: Promote the development, standards, and certification of integrated PPT components and ensembles.

Recommendation 1: Implement and sustain a comprehensive National Personal Protective Technology program

Issue 1.1: Manage and conduct research across all types of PPT and across all occupations and workplaces.

Desired Outcome:

A comprehensive PPT research program is conducted to address PPT needs in all industry sectors.

Recommendation 1: Implement and sustain a comprehensive National Personal Protective Technology program

Issue 1.2: Participate in policy development and standards setting across all types of PPT.

Desired Outcome:

PPT policy and standards development effort is in place and gaps identified and addressed.

Recommendation 1: Implement and sustain a comprehensive National Personal Protective Technology program

Issue 1.3: Oversee certification of all PPT, including an assessment of certification mechanisms.

Desired Outcome

A comprehensive certification program is in place.

Recommendation 1: Implement and sustain a comprehensive National Personal Protective Technology program

Issue 1.4: Promote the development, standards, and certification of integrated PPT components and ensembles.

Desired Outcome:

A strategy is developed and implemented to provide users confidence that multiple types of PPT have been evaluated and tested together to effectively protect workers and enable users to make informed decisions about PPT selection and use.
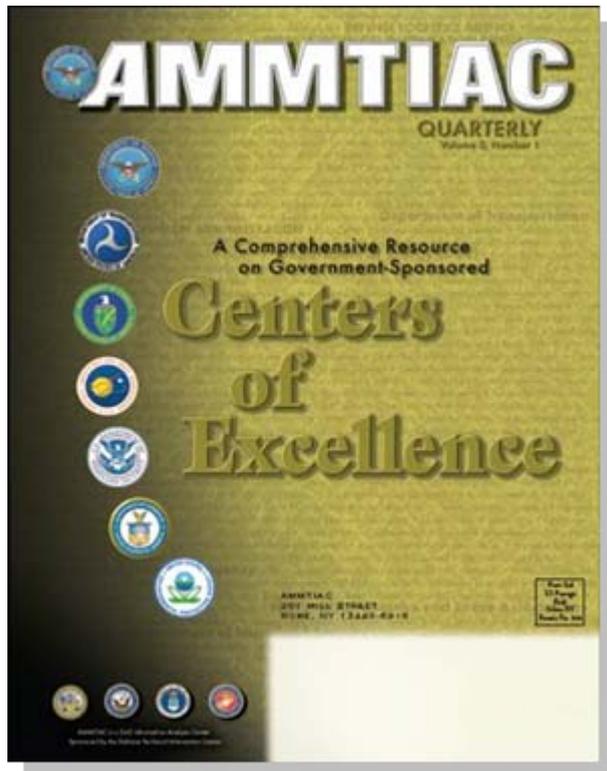
Recommendation 2: Establish PPT Research Centers of Excellence and Increase Extramural PPT Research

Issue 2.1: Establish and manage Research Centers of Excellence

Issue 2.2: Coordinate with NIOSH Office of Extramural Programs
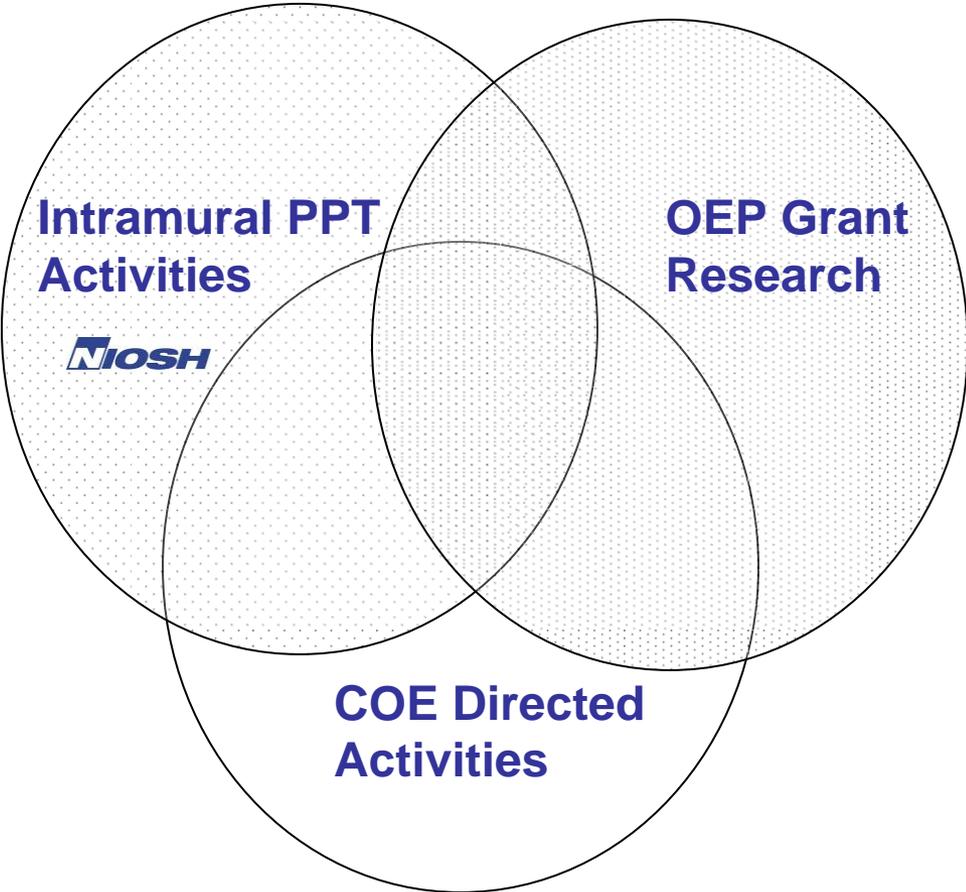
Intramural PPT Activities

NIOSH

OEP Grant Research

COE Directed Activities

Recommendation 2: Establish PPT Research Centers of Excellence and Increase Extramural PPT Research

Issue 2.1: Establish and manage Research Centers of Excellence.

Desired Outcome:

Centers of Excellence targeted at addressing key research areas are established to align with and enhance the intramural PPT Program, producing a stronger and ever-improving research base.

Recommendation 2: Establish PPT Research Centers of Excellence and Increase Extramural PPT Research

Issue 2.2: Coordinate with NIOSH OEP.

Desired Outcome:

PPT research maximizes the relevance and impact of user needs by having a coordinated program between the intramural and extramural grant activities.

PPT Program Vision is that intramural and extramural program synergy is in place.

Intramural PPT Activities

OEP Grant Research

COE Directed Activities

Recommendation 3: Enhance the Respirator Certification Program

Issue 3.1: Expedite revision of the respirator certification regulations

Issue 3.2: Update certification fees

Issue 3.3: Register the purchase of NIOSH-certified respirators

Issue 3.4: Expand the product audit program

Issue 3.5: Expand the site audit program

Issue 3.6: Disseminate respirator certification test results data.
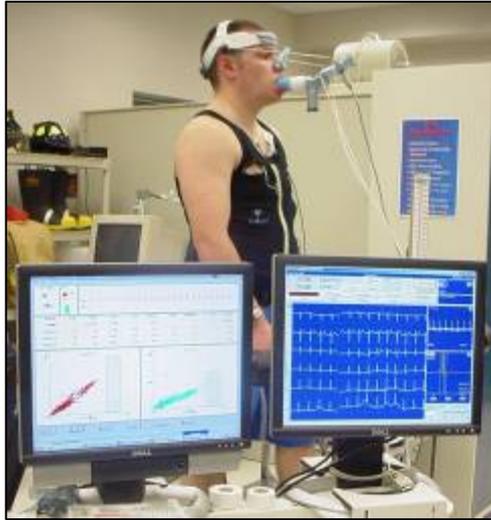
Recommendation 3: Enhance the Respirator Certification Program

Issue 3.1: Expedite revision of the respirator certification regulations.

Desired Outcome:

Improve respirator performance for end users and reduce confusion due to missing elements in 42 CFR, Part 84.

Recommendation 3: Enhance the Respirator Certification Program

Issue 3.2: Update certification fees.

Desired Outcome:

The recovery of fees will substantially supplement funds used for the respirator certification and approval reducing demands on internal funding.

Recommendation 3: Enhance the Respirator Certification Program

Issue 3.3: Register the purchase of NIOSH-certified respirators.

Desired Outcome:

Registration across multiple classes of respirators will enable a better understanding of respirator deployment, distribution of other data, and knowledge leading to reduced injuries and fatalities.

Recommendation 3: Enhance the Respirator Certification Program

Issue 3.4: Expand the product audit program.

Desired Outcome:

A product audit program that is robust and statistically valid. Sample size for respirator class representative of the population.

Recommendation 3: Enhance the Respirator Certification Program

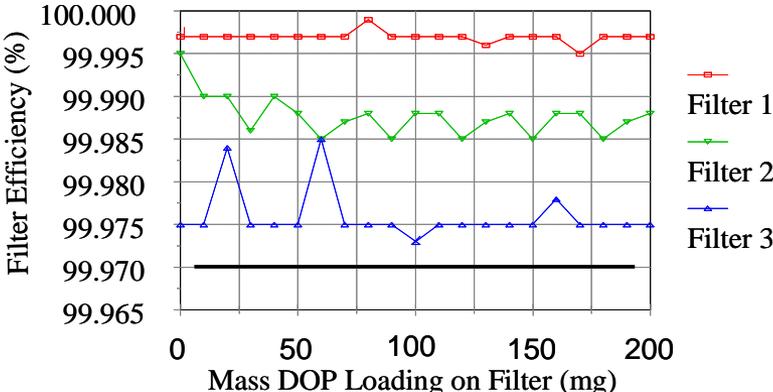
Issue 3.5: Expand the site audit program.

Desired Outcome:

A site audit program that uses valid methodology, is properly managed, monitored, and program is recognized as statistically valid.

Recommendation 3: Enhance the Respirator Certification Program

Issue 3.6: Disseminate respirator certification test results data.

Desired Outcome:

Establish a transparent process to increase end user confidence in respirator performance.

Recommendation 4: Increase Research on the Use and Usability of PPT

Issue 4.1: Define Barriers to and Facilitators of PPT Use

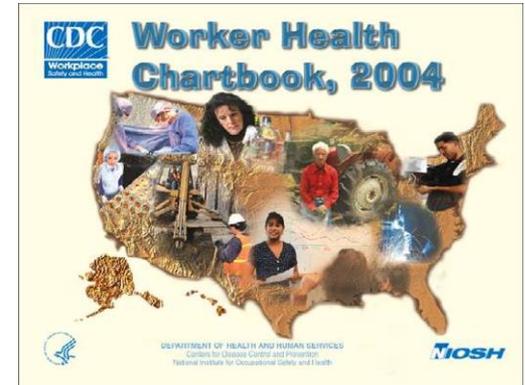**Issue 4.2: Develop innovative PPT designs and test methods to improve comfort, fit, and usability**

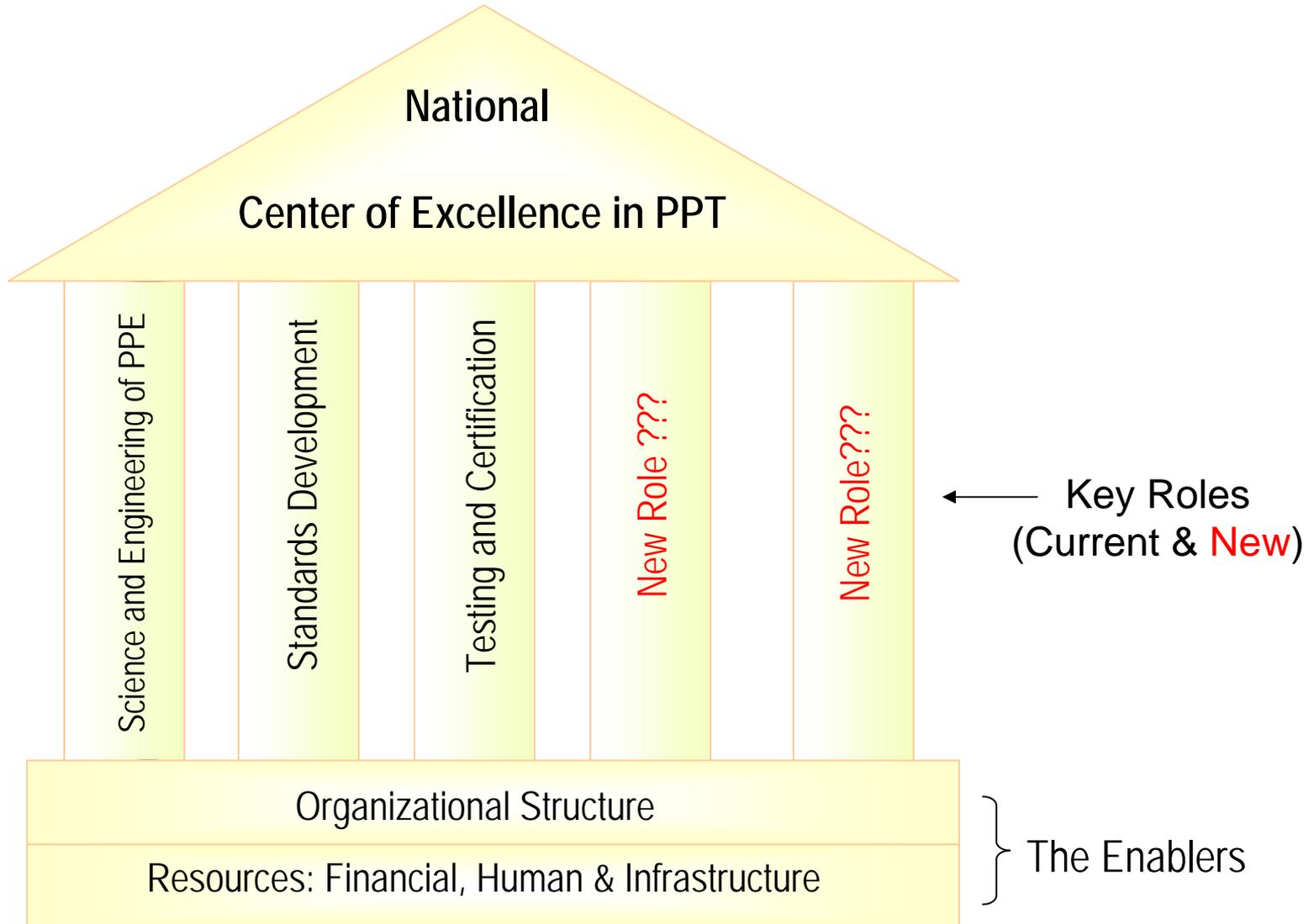**Issue 4.3: Develop systems integration strategies for PPT and components**

Recommendation 5: Assess PPT Use and Effectiveness in the Workplace Using a Life-Cycle Approach

Issue 5.1: Establish a comprehensive surveillance program

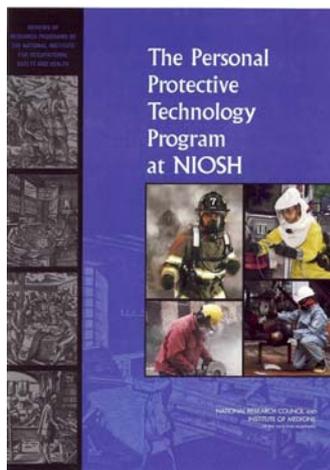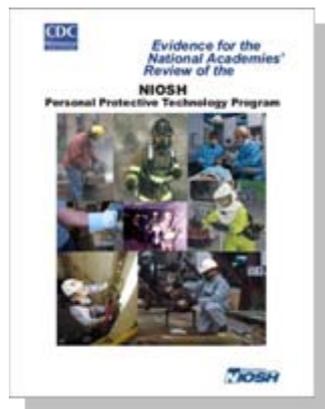**Issue 5.2: Conduct random periodic field testing of PPE**

PPT Program: Protecting the Nation

National

Center of Excellence in PPT

Science and Engineering of PPE

Standards Development

Testing and Certification

New Role ???

New Role???

Key Roles
(Current & New)

Organizational Structure

Resources: Financial, Human & Infrastructure

The Enablers

From COPPE Assessment of NPPTL - Oct 28, 2008

What do we need to do?

COPPE
Assessment
and other inputs

Develop the Future PPT Program

How can you help?

- **Provide recommendations for intermediate outcomes**

  "Intermediate goals are the desired activities that organizations or individuals undertake with research or public health practice outputs created by the program. If possible, an intermediate goal should state both the stakeholder actor and the research or public health output the stakeholder will use."
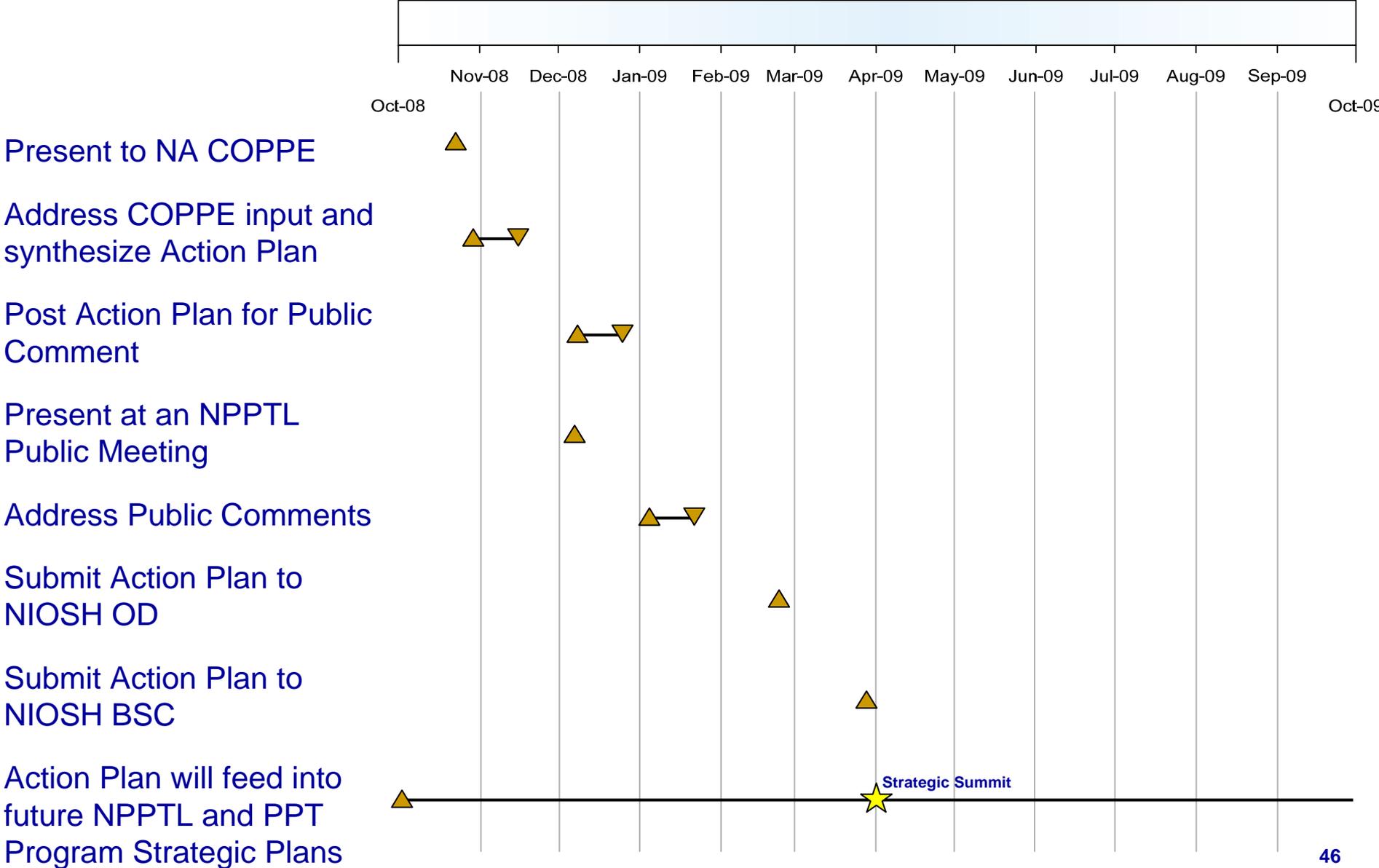
Example: Filter capacities identified in NIOSH standards are incorporated in manufacturer design specifications as evidenced by NIOSH approved respirators
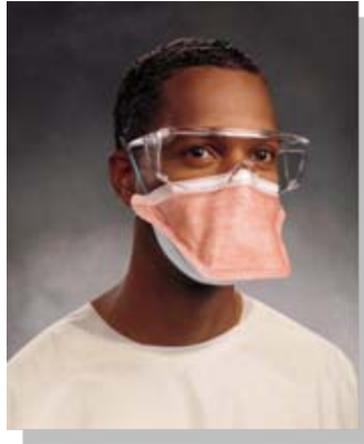
How can you help?

- **Provide feedback on Action Plan**

  - Current PPT Program Activities

    - http://www.cdc.gov/niosh/programs/ppt/projects.html#2008

  - PPT Program Evaluation

    - http://books.nap.edu/catalog.php?record_id=12203

  - PPT Program Action Plan

    - Reference Docket: NIOSH-146/PPT Action Planning, email comments to: niocindocket@cdc.gov

    - Action Plan to be posted in December

Steps to Finalize Action Plan

Present to NA COPPE

Address COPPE input and synthesize Action Plan

Post Action Plan for Public Comment

Present at an NPPTL Public Meeting

Address Public Comments

Submit Action Plan to NIOSH OD

Submit Action Plan to NIOSH BSC

Action Plan will feed into future NPPTL and PPT Program Strategic Plans

Strategic Summit

Oct-08   Nov-08   Dec-08   Jan-09   Feb-09   Mar-09   Apr-09   May-09   Jun-09   Jul-09   Aug-09   Sep-09   Oct-09

NIOSH NPPTL/PPT Program

Visit Us at: http://www.cdc.gov/niosh/programs/ppt/

http//www.cdc.gov/niosh/npptl

Disclaimer:

The findings and conclusions in this presentation have not been formally disseminated by the National Institute for Occupational Safety and Health and should not be construed to represent any agency determination or policy.

Thank you