

10th Annual NDIA Conference

Air Force STEM Workforce Today and Tomorrow

Leif E. Peterson

Member, NRC Committee on USAF STEM Workforce
Needs and Strategy

The National Academies

- National Academy of Sciences
- National Academy of Engineering
- Institute of Medicine
- and National Research Council (NRC)

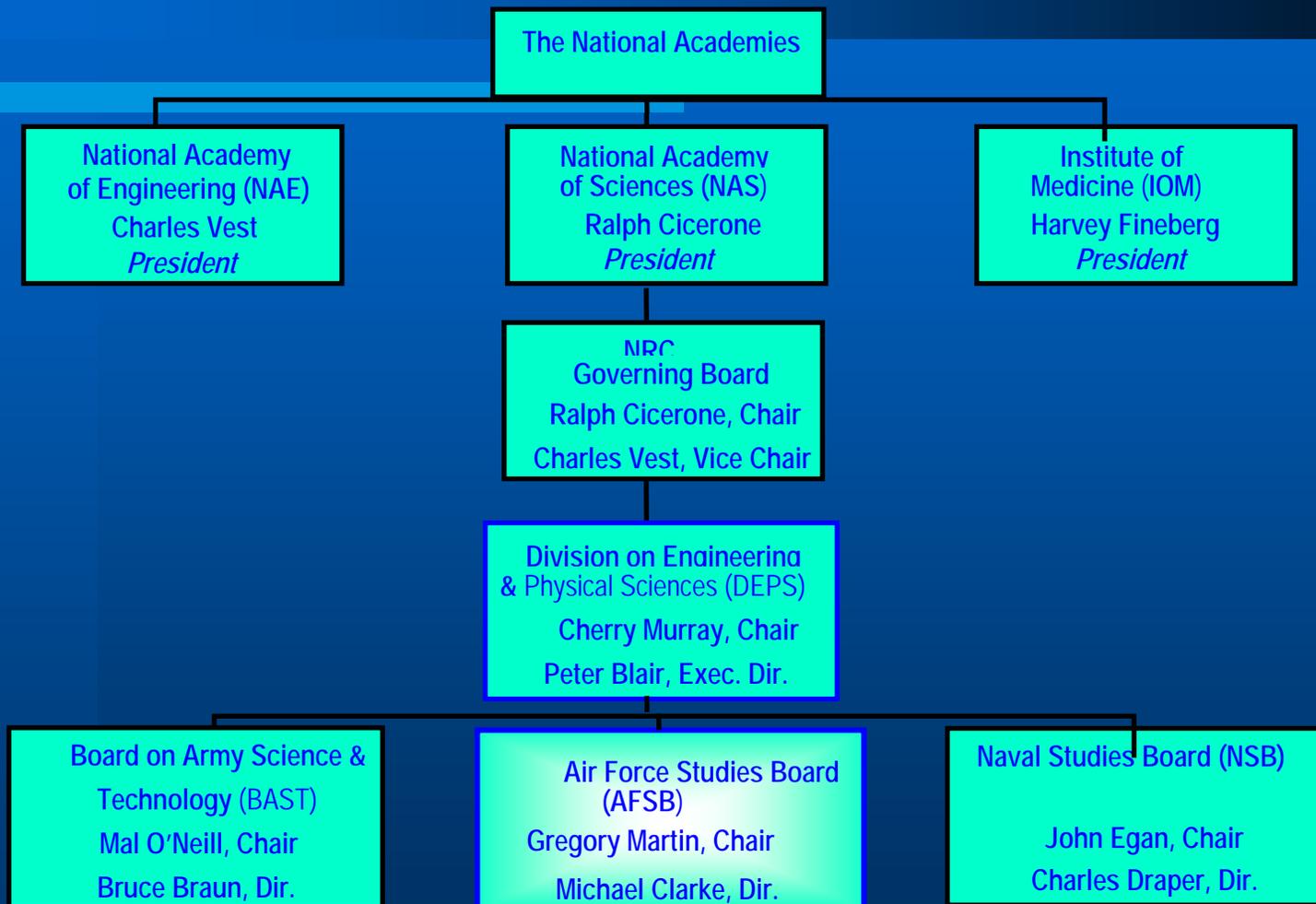
Not-for-profit corporation –

Executive Order 2859

Non-competitive contracting

<http://www.nationalacademies.org>

The National Academies



RULES OF THE ROAD

- Section 15 of Federal Advisory Committee Act (FACA) governs activities of ad hoc committees
- **NRC speaks only through peer-reviewed written reports.** Any other advice is the opinion of the individual committee member and should not be considered “official”
- NRC Governing Board approves studies, boards and committee members - not the sponsor

Study Roadmap

DEFINING THE STUDY

**NRC
Governing
Board
reviews and
approves
study scope
and plan**

STAGE 1

COMMITTEE SELECTIONS AND APPROVAL

**Project
Starts when
funding is
received**

**Provisional
slate
approved by
NAS
president**

**Provisional
committee
posted for
public
comment via
Current
Projects
System**

STAGE 2

Committee balance and expertise evaluated; any conflicts of interests are investigated

Final committee formally approved

Monitoring for potential conflicts of interest continues

Reviewers comment on report

National Academies sign off on report

COMMITTEE SELECTION AND APPROVAL

REPORT REVIEW

COMMITTEE MEETINGS, GATHERING, DELIBERATIONS, AND DRAFTING REPORT

Committee's first meeting

Full Committee signs off on draft report

Lastly the report is released to the sponsor and the public

STAGE 3

STAGE 4

NRC STEM Study

Examination of the U.S. Air Force's Science, Technology, Engineering, and Mathematics (STEM) Workforce Needs in the Future and Its Strategy to Meet Those Needs

Study Origin

- Requested by Terry Jagers, SAF/AQR
- Co-sponsored by Joseph McDade, HAF/A1D

Statement of Task

- Assess the STEM capabilities the U.S. Air Force
- Determine whether those capabilities will meet AF needs
- Identify and evaluate strategy options
- Address STEM capability in terms of functional mgt areas
- Identify and evaluate options re organization and management of Air Force STEM workforce
- Recommend strategies to meet STEM needs in the future

Members

Natalie W. Crawford, *Co-Chair*

William P. Ard

James B. Armor, Jr.

Earl H. Dowell

Richard P. Hallion

Michael A. Hamel

Ray M. Haynes

Leon A. Johnson

Lester McFawn

George K. Muellner, *Co-Chair*

Michael C. McMahan

Donald L. Peterson

Leif E. Peterson

Albert A. Robbert

Paula E. Stephan

Todd I. Stewart

Ronald W. Yates

NRC STEM Study

- Five Meetings – Aug 2008 Jan 2009
- 25+ speakers & presentations
- SAF/AQR & X, A1, A8, A9, HQ AFMC & Centers, ACC, AMC, AFSPC, AFIT, USAFA, AETC, AFRS, Toffler Assoc., SAIC, Battelle
- Numerous studies & reports
(i.e., AF, NRC, NDIA, National Science Foundation)

Status

- Pending peer review
- Final edits
- Approval & release – late June, early July

Norm Augustine – Jan 2009

Congressional Testimony

Competing in the New World Economy

Past 50 years – 50-85% GNP growth rooted in S&E
4 % of workforce in S&E

“Gathering Storm”

K-12 education in US – one of worlds worst, spend more per capita than all nations but two
Engineering & physical sciences grads - down 20%
US citizens achieving PhD's – down 34%
Engineering PhD's in US – 2/3 are non-US citizens

Interventions elsewhere.....

NASA – 50% new hires – ‘fresh outs’

Navy – CNO, 65% Academy 2013 grads in science, engineering, or math majors

Something to Think About...

“If you don’t solve (the K-12 education problem), nothing else is going to matter all that much.”

Alan Greenspan

“The only sustainable competitive advantage is the ability to be able to learn faster than your competition.”

Peter Senge

“You are today where your thoughts have brought you, you will be tomorrow where your thoughts take you.”

James Allen

