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WHCI - Management of Science, Engineering and Technology Policies 1989

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G	12	8	7	1

THE WHITE HOUSE

WASHINGTON

February 22, 1989

MEMORANDUM FOR C. BOYDEN GRAY

FROM: ARNOLD INTRATER AI

SUBJECT: Recommendations of the American Society of Mechanical Engineers on Management Issues

The attached letter from Ernest L. Daman of the American Society of Mechanical Engineers (ASME) and enclosed position paper contains recommendations for institutional changes to improve the government's management in the areas of science, engineering and technology. Daman writes "on behalf of ASME's 118,000 members."

It looks like the kind of thing that ought to be referred to OMB's management side for review. If you agree, I have prepared a letter responding to Daman and a referral memorandum to OMB for your signature.

Attachments

THE WHITE HOUSE

WASHINGTON

February 22, 1989

MEMORANDUM FOR RICHARD G. DARMAN
DIRECTOR
OFFICE OF MANAGEMENT AND BUDGET

FROM: C. BOYDEN GRAY
COUNSEL TO THE PRESIDENT

SUBJECT: Recommendations of the American Society of Mechanical Engineers on Management Issues

I am forwarding to you the attached letter and position paper from Ernest L. Daman, Director, American Society of Mechanical Engineers. The paper sets forth recommendations regarding the federal government's management of science, engineering and technology policies. I am referring it to you without any comment or endorsement for consideration by the appropriate OMB officials.

Attachment

THE WHITE HOUSE

WASHINGTON

February 22, 1989

Dear Mr. Daman:

Thank you for your letter dated January 31, 1989 and enclosed position paper which sets forth recommendations regarding the federal government's management of science, engineering and technology policies. I have forwarded the position paper to the Director of the Office of Management and Budget for appropriate review.

Sincerely,

C. Boyden Gray
Counsel to the President

Ernest L. Daman, President
American Society of Mechanical Engineers
345 East 47th Street
New York, New York 10017

ID # 002945 CU

WHITE HOUSE
CORRESPONDENCE TRACKING WORKSHEET

☐ O - OUTGOING
☐ H - INTERNAL
☐ I - INCOMING
Date Correspondence Received (YY/MM/DD) 1 1

arnd

Name of Correspondent: Ernest L. Daman

☐ **MI Mail Report** **User Codes: (A)** _____ **(B)** _____ **(C)** _____

Subject: paper: "Management of Science, Engineering and Technology Policies by the Federal Government" ✓

ROUTE TO:

Office/Agency (Staff Name)	Action Code	Tracking Date YY/MM/DD	Type of Response	Code	Completion Date YY/MM/DD
CU OFC	ORIGINATOR	89/01/31		C	89/01/31
	Referral Note:				
CU AT06	I	89/02/01			/ /
	Referral Note:				
CUAT02	D	89/02/01			89/02/11
	Referral Note:				
		/ /			/ /
	Referral Note:				
		/ /			/ /
	Referral Note:				

ACTION **DISPOSITION**

ACTION CODES:
A - Appropriate Action
C - Comment/Recommendation
D - Draft Response
F - Furnish Fact Sheet to be used as Enclosure
I - Info Copy Only/No Action Necessary
R - Direct Reply w/Copy
S - For Signature
X - Interim Reply

DISPOSITION CODES:
A - Answered
B - Non-Special Referral
C - Completed
S - Suspended

FOR OUTGOING CORRESPONDENCE:
Type of Response = Initials of Signer
Code = "A"
Completion Date = Date of Outgoing

Comments: OTBE DBH 2/7/91

Keep this worksheet attached to the original incoming letter.
Send all routing updates to Central Reference (Room 75, OEOB).
Always return completed correspondence record to Central Files.
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ID # 002945 CU

WHITE HOUSE
CORRESPONDENCE TRACKING WORKSHEET

☐ O - OUTGOING
☐ H - INTERNAL
☐ I - INCOMING
Date Correspondence Received (YY/MM/DD) 1 1

arnd

Name of Correspondent: Ernest L. Duncan

☐ **MI Mail Report** **User Codes: (A)** _____ **(B)** _____ **(C)** _____

Subject: paper: "Management of Science Engineering and Technology Policies by the Federal Government"

ROUTE TO:		ACTION		DISPOSITION		
Office/Agency	(Staff Name)	Action Code	Tracking Date YY/MM/DD	Type of Response	Code	Completion Date YY/MM/DD
CU	OFC	ORIGINATOR	89/01/31		C	89/01/31
		Referral Note:				
CU	AT 06	I	89/02/01			/ /
		Referral Note:				
CU AT 02		D	89/02/01			89/02/11
		Referral Note:				
			/ /			/ /
		Referral Note:				
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5/87

The American Society of
Mechanical Engineers

Ernest L. Daman
President
212-705-7732

345 East 47th Street
New York, NY 10017

89 JAN 31 A 9:44

Copy to:
ASME Executive Director

January 30, 1989

C. Boyden Gray
Counsel to the President
The White House
1600 Pennsylvania Avenue, N.W.
Washington, D.C. 20500

Dear Mr. Gray:

Many of the public policy issues facing the nation today, including industrial competitiveness, environment, energy and national security, involve science, engineering and technology. As the Bush Administration confronts these issues, we believe it would be well served by providing a voice for science, engineering and technology at the cabinet level.

The enclosed paper, "Management of Science, Engineering and Technology Policies By the Federal Government," contains recommendations of the American Society of Mechanical Engineers (ASME) on institutional changes in the executive and legislative branches to improve the government's management of these important policy issues.

On behalf of ASME's 118,000 members, I hope you will find this paper to be helpful in developing the mechanisms in the Bush Administration to effectively handle science, engineering and technology issues.

Sincerely,

Ernest L. Daman

Ernest L. Daman
President

The American Society of
Mechanical Engineers

Ernest L. Daman
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Ernest L. Daman

Ernest L. Daman
President

The American Society of
Mechanical Engineers

Suite 218
1825 K Street, N.W.
Washington, DC 20006-1202
202-785-3756

General Position Paper

on

Management of Science, Engineering and Technology Policies By the Federal Government

January, 1989

The American Society of
Mechanical Engineers

Suite 218
1825 K Street, N.W.
Washington, DC 20006-1202
202-785-3756

General Position Paper

on

Management of Science, Engineering and Technology Policies By the Federal Government

January, 1989

Introduction

This statement sets forth the recommendations of the American Society of Mechanical Engineers on how to improve the Federal government's management of science, engineering and technology (SET) policies.

Background

A healthy science and engineering enterprise and the effective development and use of technology are essential to regaining America's international economic competitiveness, and to strengthening our standard of living and national security. Technological advances have provided the bedrock for productivity and economic growth in the United States in the past and will continue to do so in the future. In fact, structural changes in the domestic and international economies and the rapid pace of technological change are causing science and technology to have an even more significant impact on our economic well-being. The nation is becoming more and more reliant on technology-based industries and technology-based improvements in basic industries to provide jobs and economic growth. At the same time, our ability to compete internationally is being challenged as never before.

Despite the critical importance of science, engineering and technology to the nation, the Federal government is ill-equipped to effectively manage pressing SET policy issues. Within the Executive Branch, there is no agency or official with broad responsibility for the development and implementation of science and technology policy. Within the White House, the Director of the Office of Science and Technology Policy (OSTP) serves in an advisory capacity to the president. But with no program responsibilities and a limited budget, his actual authority is very limited. Therefore, there is no institutional mechanism at the highest policymaking levels of government to champion policies and programs in support of technology development; to assess the impact of proposed laws and regulations on the nation's economic competitiveness; to coordinate policies across the government bureaucracy; and to set priorities for federal funding of research and development.

In 1988, the Federal government will spend about $61 billion on research and development, about half of the nation's total R&D spending. Despite the importance of R&D and the government's huge investment, there is no effort or mechanism to set priorities or goals for R&D. Nearly every agency and department will fund some

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In 1988, the Federal government will spend about $61 billion on research and development, about half of the nation's total R&D spending. Despite the importance of R&D and the government's huge investment, there is no effort or mechanism to set priorities or goals for R&D. Nearly every agency and department will fund some

research and development. Twelve agencies will spend more than $150 million. These agencies are concerned only with their own missions and not with broad SET policy issues. We applaud the recent establishment of a Technology Administration within the Department of Commerce to oversee all of the Department's technology-related programs. However, this action will have little impact beyond the Department of Commerce.

The problem also extends to Congress, where a variety of subcommittees and committees have limited jurisdiction over science, engineering and technology issues, and there is no institutional mechanism to effectively build consensus or engage in long-term planning.

Before the development of massive federal deficits and when U.S. leadership in science, engineering and technology was not seriously challenged, the status of government policymaking was not considered to be a problem. However, in an era of limited resources and fierce international competition, the status quo does not provide sufficient management, high-level attention, consensus building and long-range planning for meeting national needs in science, engineering and technology.

Recommendations

We offer the following recommendations for improving the Federal government's management of science, engineering and technology policies:

1. Establish a cabinet-level Department of Science, Engineering and Technology to bring the development of broad SET policies under one managerial roof and to provide a single point of responsibility for the implementation of those policies. This Department would set priorities and establish long-term plans which are essential for developing and maintaining effective and coherent policies. Historically, there has been resistance to bringing the many diverse science, engineering and technology activities of government into a single agency; it has been argued that there should be multiple sources of R&D support because there is no single center of knowledge and foresight. We believe that this is a legitimate concern and agree that a diversity of funding sources should be maintained. However, this should not preclude setting priorities and coordination of policies needed to improve the effectiveness of the government's

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science, engineering and technology programs.

Recognizing the strong institutional forces against establishment of a new department, we suggest that as an interim step, the president should elevate the Director of OSTP to a cabinet-level position reporting directly to the president. With cabinet-level status, the "science and engineering advisor" should serve on key interagency policy groups such as the Economic Policy Council to assure that science, engineering and technology are considered in the development of national policies.

The science and engineering advisor would essentially be a cabinet-level officer without a portfolio of programs. However, the advisor would develop broad science, engineering and technology policies for review and approval by the president, and then coordinate and implement those policies across individual agencies. The advisor would also have responsibility for review of R&D budgets, in cooperation with the Office of Management and Budget, to help assure that the overall science and technology budget is consistent with national policies. The advisor must be provided the necessary resources to effectively carry out these responsibilities through expansion of the OSTP staff and budget.

2. Streamline and consolidate Congressional review of science, engineering and technology policies. Improvement in the management of science, engineering and technology policies within the Executive Branch must be accompanied by changes in Congressional review of these policies. The proliferation of committees and subcommittees with jurisdiction over various pieces of R&D funding and SET policies has led to fragmented policies because no one official or agency has responsibility for setting broad objectives and priorities.

We recommend that one committee in the Senate and one in the House be given broad jurisdiction over all major science, engineering and technology programs. In this way, priorities and coherent policies could be thoughtfully considered and authorized. We are not, of course, suggesting that authorizations for entire agencies be brought into these committees--only their science, engineering and technology programs.

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We also recommend that the Senate and House Budget and Appropriations Committees develop and review an overall budget for science, engineering and technology programs. This review should focus on broad national needs and should include multi-year planning.

Finally, Congress should explore ways to bring science, engineering and technology considerations into the development of other national policies, including economics, taxes, trade, energy, and environment. Congress could take a first step by directing the Congressional Budget Office or Office of Technology Assessment to prepare "competitiveness impact statements" on proposed legislation which would have a cost to the public or private sectors exceeding a specified amount, such as $100 million.

Summary

Historically, the United States has led the world in science, engineering and technology. Some would argue that we have lost that leadership today. Certainly the marketplace for technology-related goods and services has become international in scope, and the suppliers to that marketplace have become significantly more capable and numerous. At best, our leadership in the world has shrunk and in some areas has been overtaken. The status quo for the U.S. science, engineering and technology enterprise will no longer win the race; changes are needed in both the private and public sectors to improve the nation's competitive posture. ASME believes that the changes for the Executive Branch and Congress recommended in this paper would significantly improve the Federal government's role and effectiveness in restoring America's leadership in science, engineering and technology.

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