

NATIONAL CENTER FOR ADVANCED TECHNOLOGIES



THE **NCAT** PROCESS

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p. 7

PLANS → DEMOS → PRODUCTS

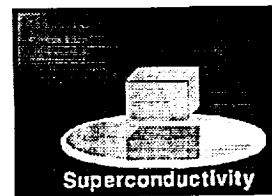
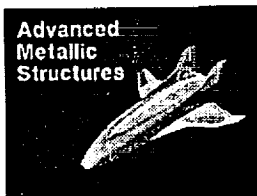
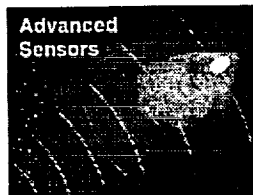
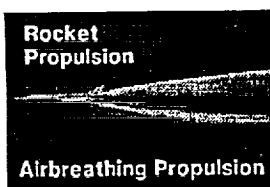
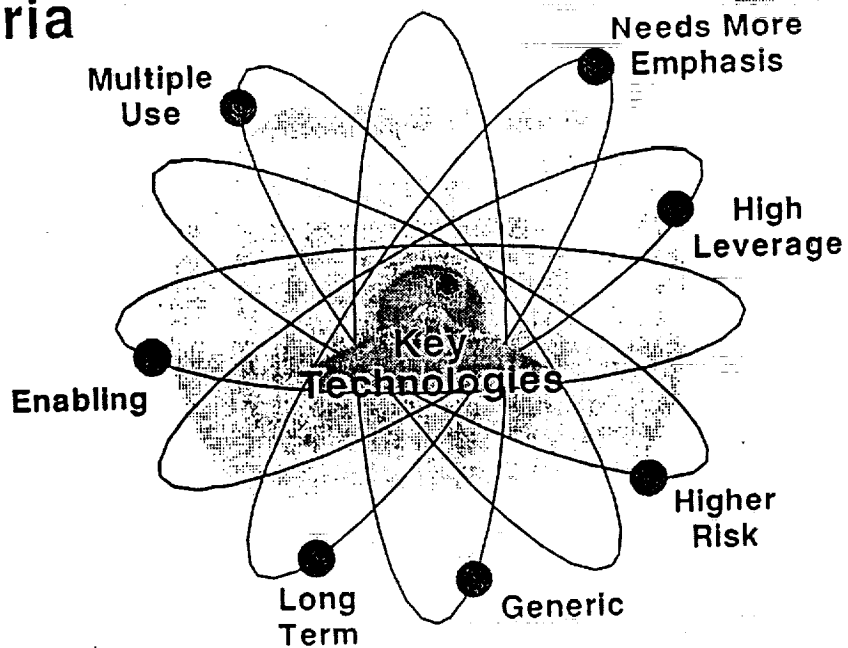
NCAT HISTORY

- CHARTERED JANUARY 1989 AS 501(c)(3) NON-PROFIT EDUCATIONAL AND RESEARCH FOUNDATION FUNDED BY SPECIAL AIA ASSESSMENT FOR 3 YEARS
- GOAL IS TO COORDINATE AND INTEGRATE "KEY TECHNOLOGIES" WITH OTHER ACTIVITIES AND CREATE NATIONAL TECHNOLOGY STRATEGIC PLANS
- NCAT DEVELOPED CONSENSUS PLANS; SPONSORED TECHNOLOGY SYMPOSIA; HELD SEPTEMBER '91 POLICY SYMPOSIUM
- NCAT IS WORKING ON TECHNOLOGY DEMONSTRATIONS TO BRING TECHNOLOGIES TO PRODUCTS FASTER

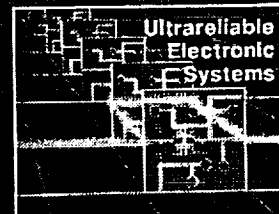
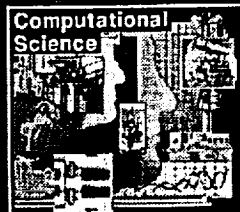
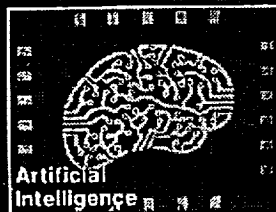
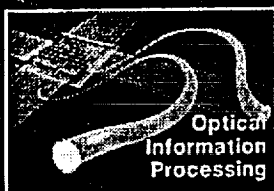
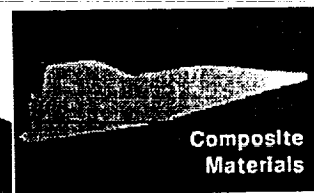
Technologies Selection Criteria

KEY TECHNOLOGIES FOR THE YEAR

2000



KEY TECHNOLOGIES

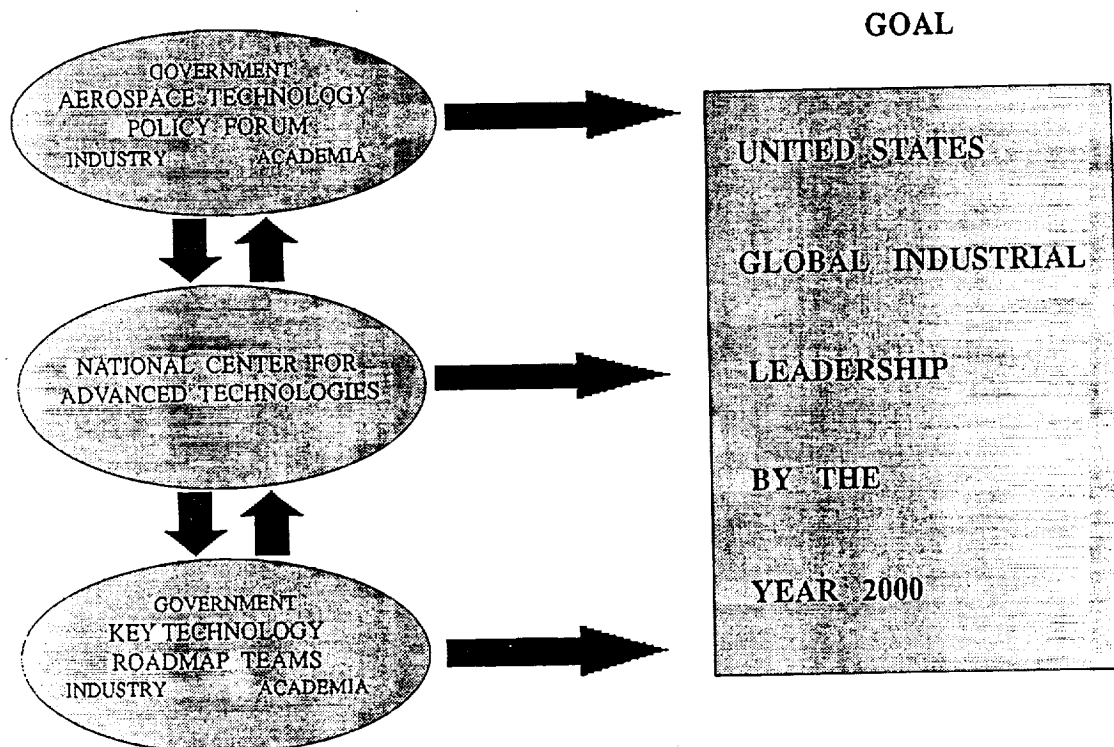


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STRATEGIC PLAN STATUS

<u>TECHNOLOGY</u>	<u>ROADMAP</u>	<u>DRAFT PLAN</u>	<u>COMPLETED PLAN</u>
Rocket Propulsion	X	X	X
Advanced Sensors	X	X	
Advanced Composites	X	X	X
Ultra-Reliable Electronic Systems	X	X	X
Airbreathing Propulsion	X	X	X
Optical Information Processing	X		
Software Development	X	Working w/ DoD Software Technology Strat.	
Artificial Intelligence	X	X	
Superconductivity	X	Discontinued, applications not emerging	
Computational Science	X		
Advanced Metallic Structures			As of 3/92

IMPLEMENTATION FRAMEWORK



FORUM COMPOSITION

GOVERNMENT:

OSTP
 NASA
 OSD (DDR&E)
 NSF
 DOE
 AIR FORCE
 NAVY
 ARMY
 DOC
 DARPA

INDUSTRY:

AIA
 NCAT
 LOCKHEED
 WESTINGHOUSE
 ALCOA

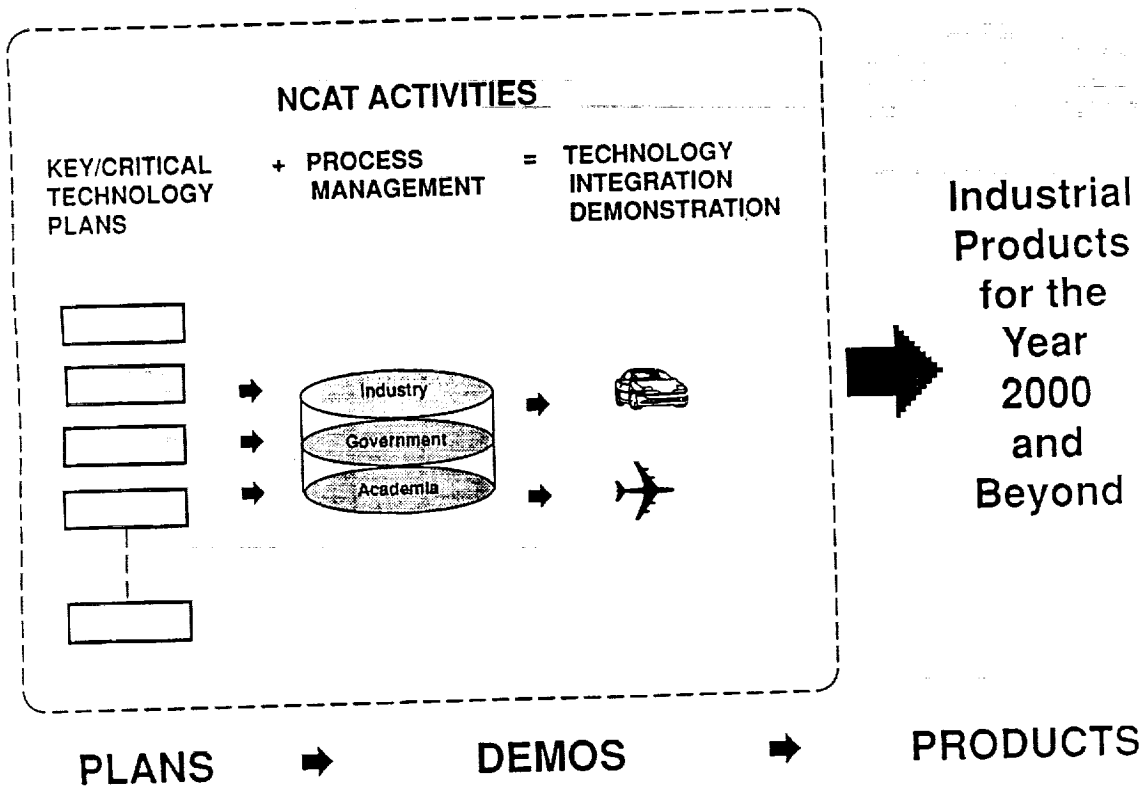
UNIVERSITIES:

UNIVERSITY OF WASHINGTON
 STANFORD UNIVERSITY
 TEXAS A& M
 PENN STATE UNIVERSITY
 GEORGIA TECH

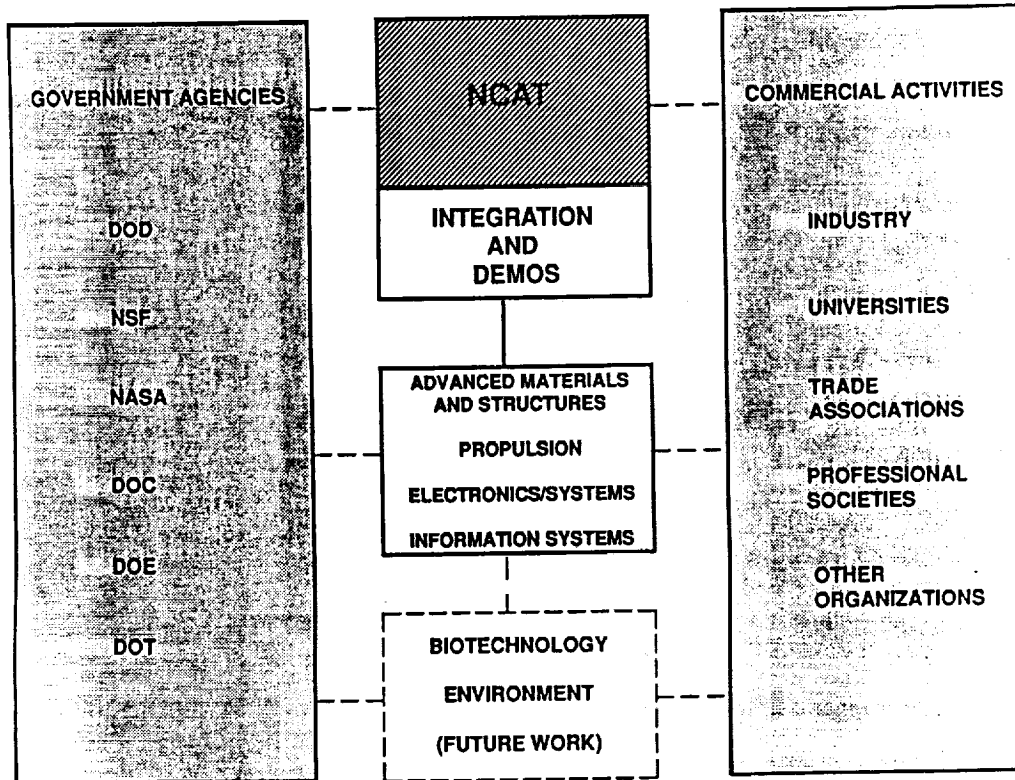
CONGRESSIONAL ADVISORS:

SENATE ARMED SERVICES COMMITTEE
 SUBCOMMITTEE ON DEFENSE INDUSTRY AND TECHNOLOGY
 HOUSE APPROPRIATIONS DEFENSE SUBCOMMITTEE
 HOUSE SCIENCE, SPACE AND TECHNOLOGY COMMITTEE

NCAT ROLE AS INTEGRATOR



GOVERNMENT/ INDUSTRY COORDINATION



IDENTIFICATION AND SELECTION PROCESS FOR DEMOS

- REVIEWED NCAT KEY TECHNOLOGY DEVELOPMENT PLANS
- REVIEWED SUGGESTIONS FROM NCAT KEY TECHNOLOGY TEAMS
- REQUESTED INPUT AT AIA/NCAT KEY TECHNOLOGY SYMPOSIUM IN SEPTEMBER 1991
- CONVENEED INDUSTRY/GOVERNMENT/UNIVERSITY MEETING IN JANUARY 1992 TO DEVELOP SELECTION CRITERIA
- CONVENEED NCAT WORKSHOP IN FEBRUARY 1992 TO DEVELOP A LIST OF POTENTIAL DEMONSTRATIONS ACCORDING TO JANUARY 1992 CRITERIA
- KEY TECHNOLOGIES COMMITTEE DEVELOPED A "SHORT LIST" OF POTENTIAL DEMOS
- ITERATIVE AND CONTINUING PROCESS

CRITERIA FOR DEMOS

1. **Broad Applicability**
2. **High Leverage**
3. **Existence of Need for Product Lines**
4. **Enhanced Emphasis on Product and Processes**
5. **Life - Cycle Cost, Performance, Quality, Cycle Time**
6. **Timely Product Generation**
7. **Wealth/Job Generation**
8. **Process Scalability**
9. **Large Market for Product**
10. **Involve Potential U.S. Suppliers**
11. **Represents a Leap Frog Capability**
12. **Environmentally Beneficial**

CRITERIA FOR NON-SELECTION

DUPLICATIVE OF OTHER PROGRAMS

NOT GENERIC

EXISTING EFFORT OLD TECHNOLOGY

CANNOT DEFINE WITH SUFFICIENT SPECIFICITY

NOT BOUND IN SCOPE/DEPTH

FUTURE ACTIONS

- NCAT/Key Technologies Committee needs to arrive at a consensus regarding a better "Short List".
- DEMO writeups need to be completed on all the "Short List" candidates to verify their candidacy.
- AIA T&O Council in April '92 will consider candidate programs.
- The results should be briefed to the Policy Forum in June '92 for advice on implementation steps/teaming partners/funding sources for the candidate DEMO programs.
- Government/Industry/University teams should be assigned, based on advice from the Policy Forum on candidates, to refine agreed to DEMO programs.
- Planning sessions should be held for each candidate program, its candidate partner set, and potential sponsors to finalize program definition, define funding commitments, and start the DEMO process.

Forging a New National Consensus - International Competitiveness

KEY TECHNOLOGIES FOR THE YEAR

2000

