



# The Role of Bristol-Myers Squibb in Science Teaching Reform

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Science Education Program

 Bristol-Myers Squibb Company

# ***The Challenge - Internal***

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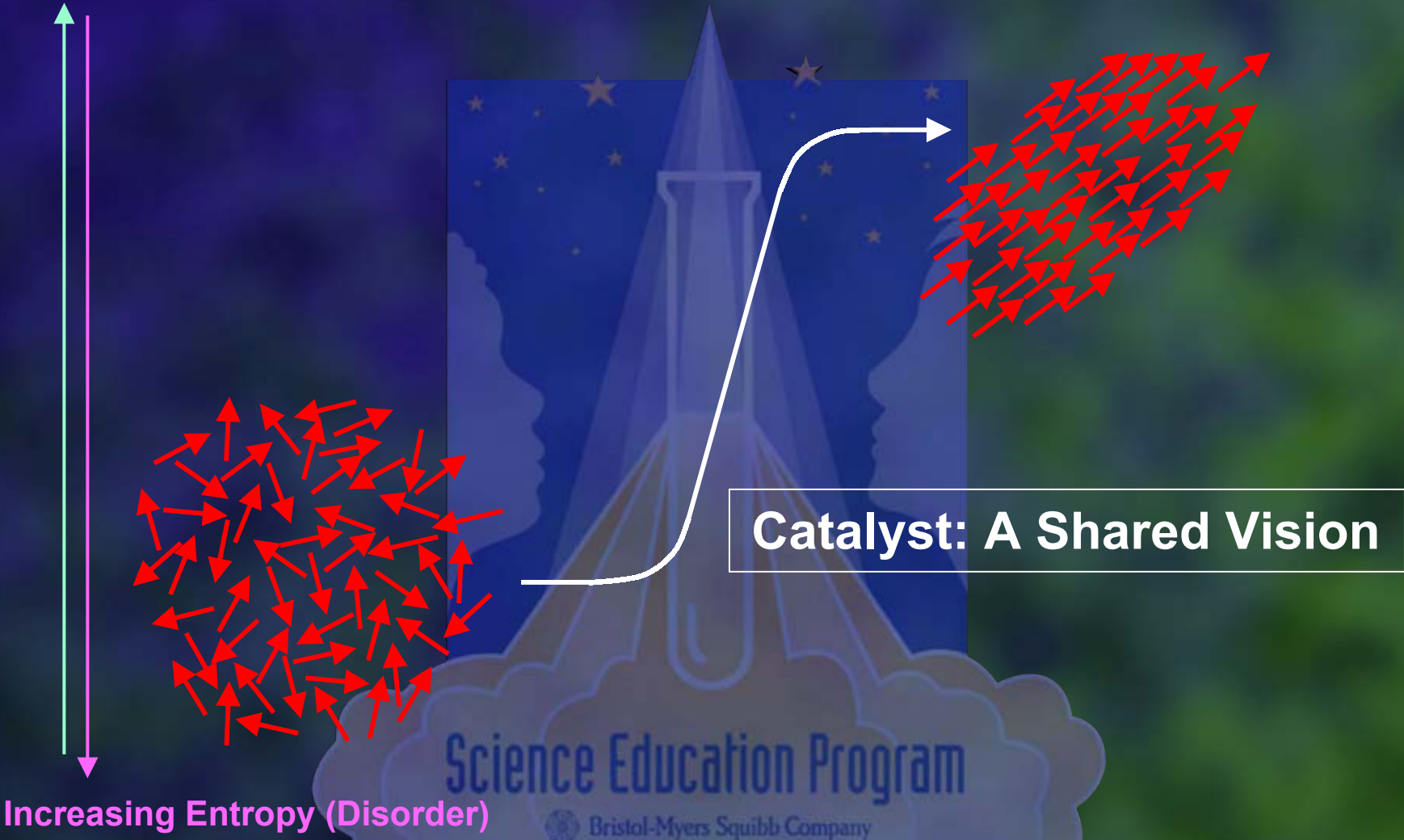
- 1. To convince an R&D-based business to make a long-term commitment of resources to education**
- 2. To build a strategic philanthropic education program based on alliances and partnerships**



# The Challenge - External



Increasing Energy



Increasing Entropy (Disorder)

Catalyst: A Shared Vision

➔ Individual Corporate Science Education Support Initiative

# ***Science Education is Our Business***

***... Because, in the Near Term, We:***

- **Increase the force of attraction on prospective new employees who consider relocation to the area**
- **Demonstrate our dedication to family values, and one of our employees' primary concerns: Their children's education**
- **Strengthen the communities where we work**

# ***Science Education is Our Business***

***... Because, in the Long Term, We:***

- **Help widen and deepen the talent pool of potential future employees**
- **Meet our responsibility to better prepare today's youngsters for a complex future living environment**

# ***Science Education is Our Business***

***... Because as a Result:***

- We will benefit from a wealth of talent and **skills in problem solving, analytical thinking, and decision making** within all job categories
- We will benefit from **educated health care consumers**, who can make well-informed decisions for themselves and their families, and about health care policy issues

# BLAST

Building Leadership and Assistance for Science Teaching



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## Strategic Cornerstones:

- Goal: Improve teaching and learning of science K-12
- Induce change through systemic science education reform (SSER)
- Execute through local, regional and national alliances and partnerships
- Build on complementary expertise and leverage of resources
- Involve BMS employees at all locations

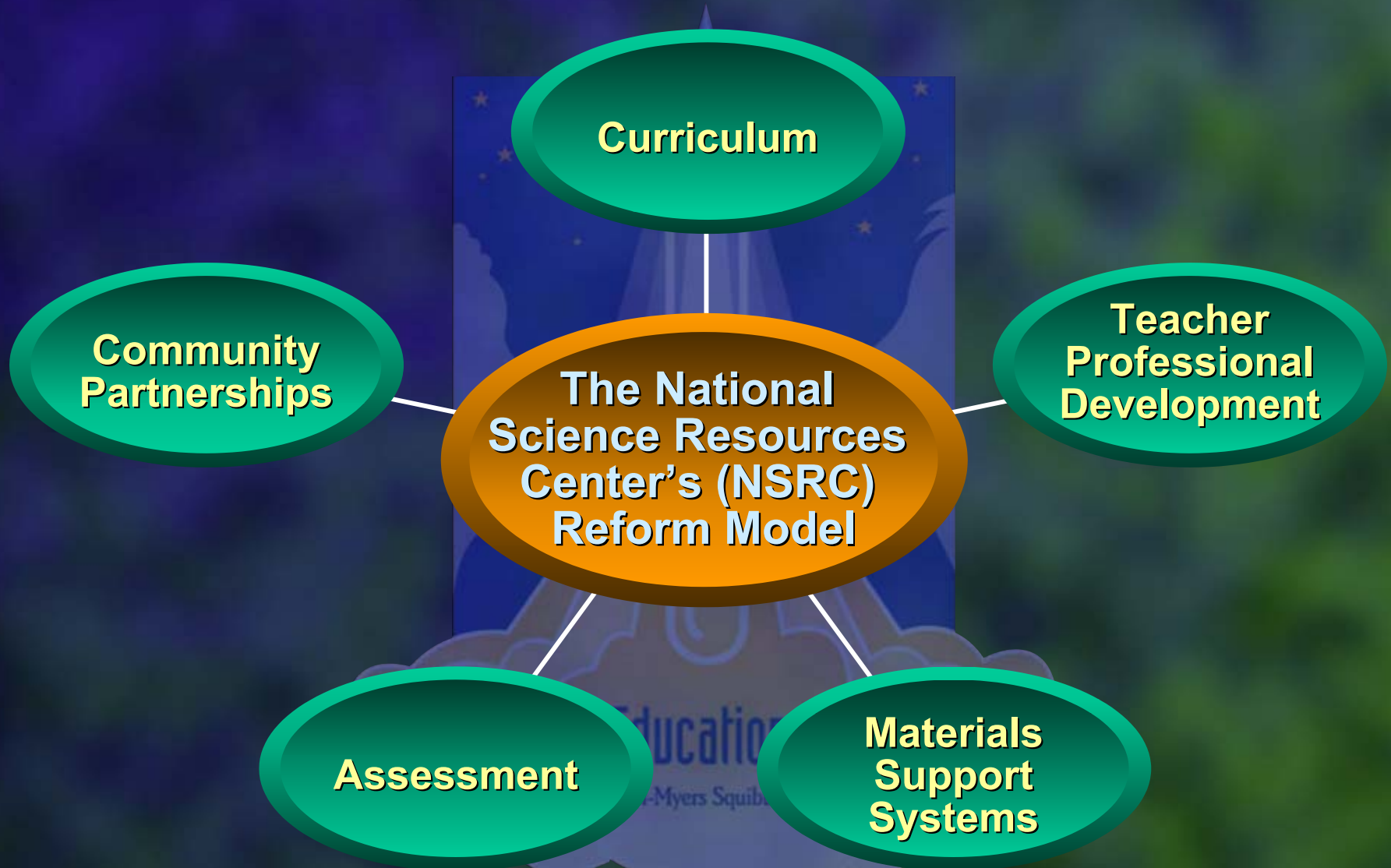
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# Bristol-Myers Squibb BLAST



*Elementary and Middle School Science Education Reform Partnerships*



# ***Bristol-Myers Squibb BLAST- NSRC partnership***

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## ***Accomplishments:***

- **>600 school districts across the nation**
- **25% of K-12 students**
- **National and International leadership**
- **Three pillars of support:**
  - **K-12 and public education leadership**
  - **Academic research and Higher education**
  - **Global corporate sector**

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# Bristol-Myers Squibb BLAST - Program Structure



## Local

- **Strategic Elementary and Middle School Science Education Reform (EMSSER) Partnerships** - Initiate and drive implementation in local public school districts and district consortia.

## Regional

- **NGO-Corporate-Educator Alliance** - Drives SSER dissemination and services at the regional level - "LASER".

## National

- **Expert Organization Alliances** - Sustain SSER through services to participating school districts, based on economy of scale/fee-for-service.
- **NGO-Corporate Alliances** - Develop and implement strategy and programs for nation-wide SSER, including legislative lobbying.

## International

- **NGO-Academy-Corporate Alliances** - Initiate and drive SSER in their respective countries.

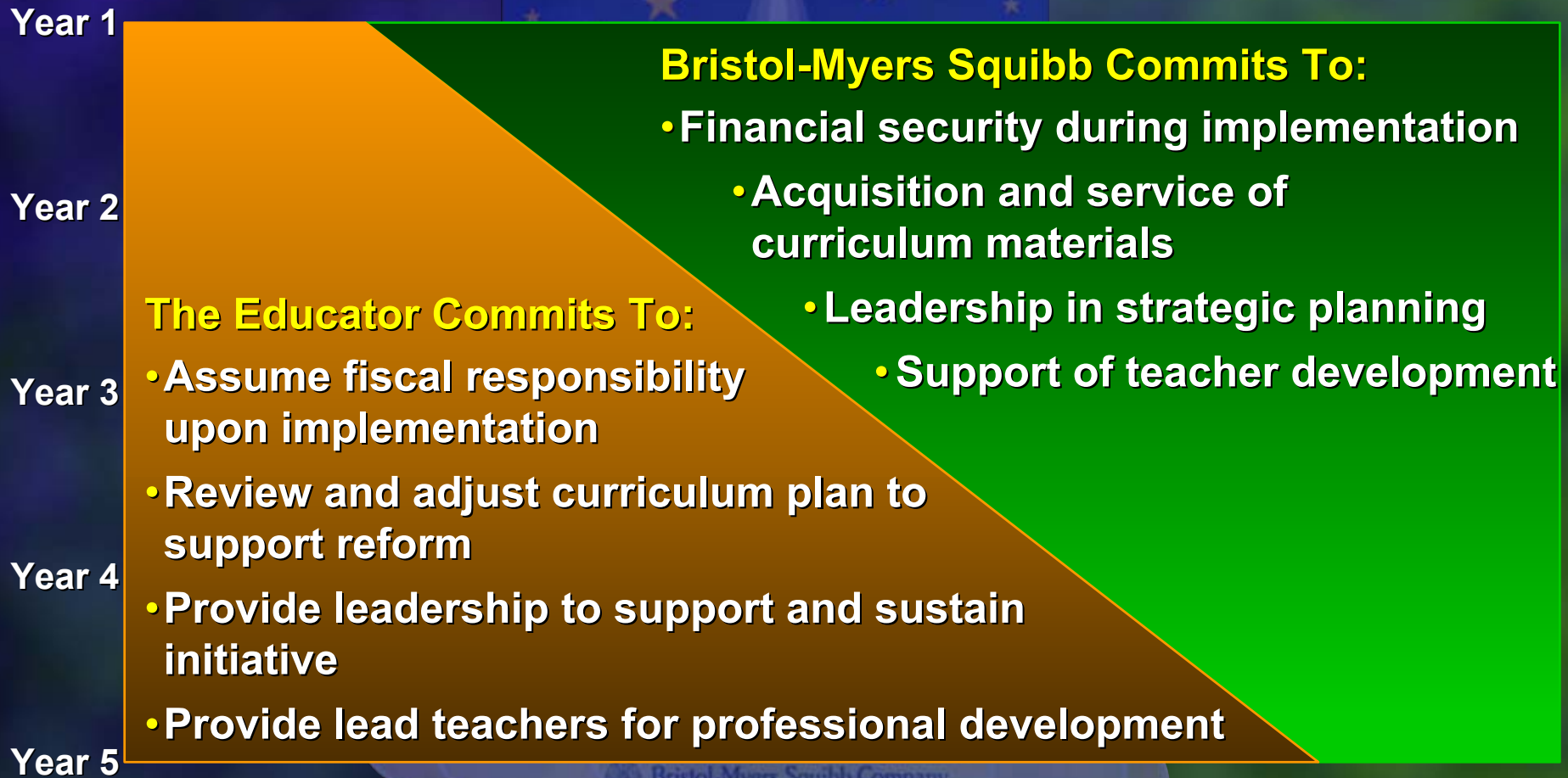
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## A Shared Commitment and Accountability for Reform



# **Bristol-Myers Squibb BLAST**



## **Elementary and Middle School Science Education Reform Partnerships**

### **Teacher Preparation and Professional Development**

#### **BMS Centers for Science Teaching and Learning**

- Rider University
- Montclair State University
- Quinnipiac University

#### **Pre-service and in-service workshops**

- Science content: Theory and facts
- Inquiry process: The scientific method
- Teaching by guided inquiry
- Technical use of curriculum units

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*Elementary and Middle School Science Education Reform Partnerships*

*Curriculum: Developmentally Appropriate  
For Hands-on Exploration by Guided Inquiry*

- **Full Option Science System (FOSS)**
- **Insights**
- **National Geographic Society Kids Network**
- **Science and Technology for Children (STC)**
- **Science Education for Public Understanding Project (SEPUP)**
- **Scholastic**

# **Bristol-Myers Squibb BLAST**



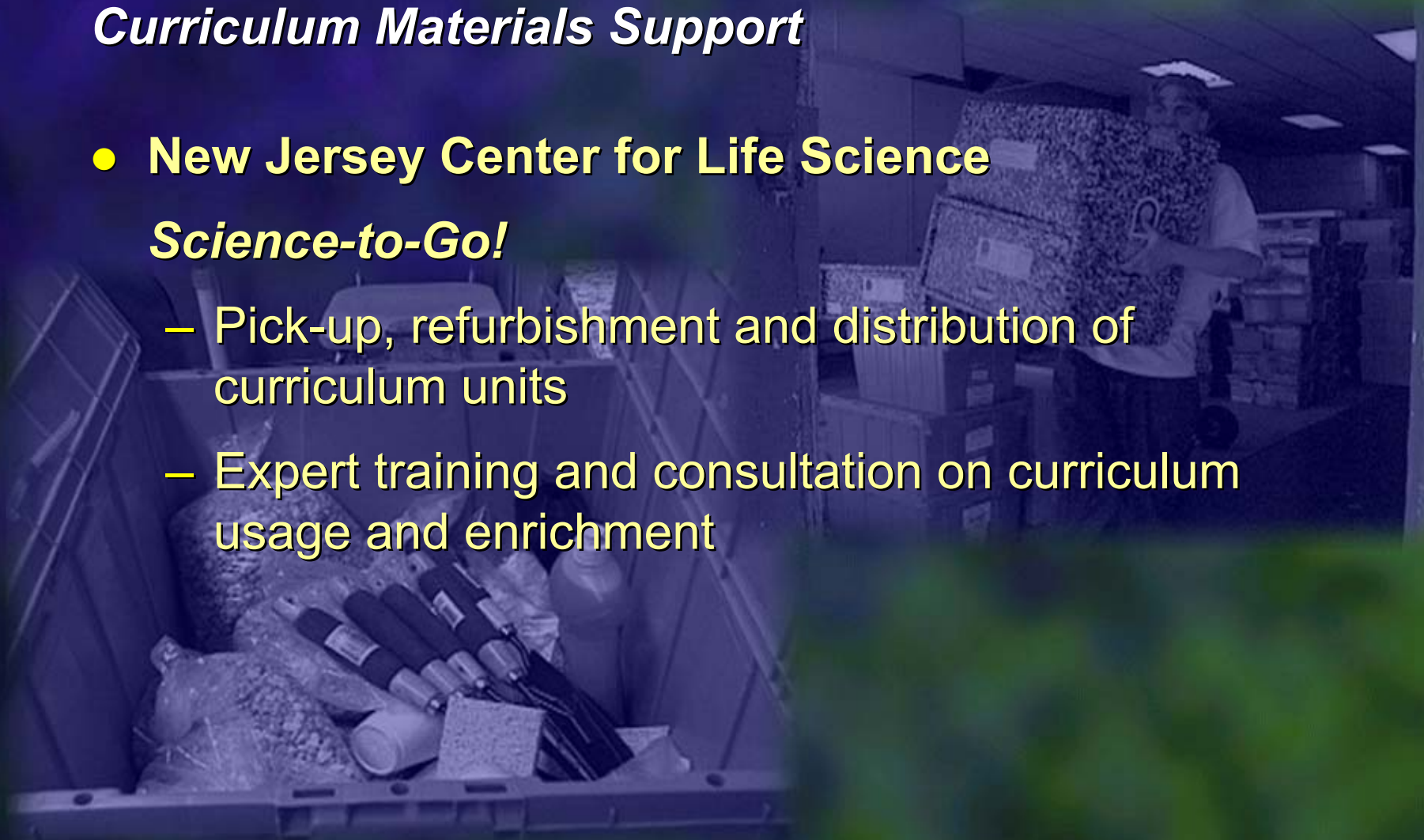
## **Elementary and Middle School Science Education Reform Partnerships**

### **Curriculum Materials Support**

- **New Jersey Center for Life Science**

#### **Science-to-Go!**

- Pick-up, refurbishment and distribution of curriculum units
- Expert training and consultation on curriculum usage and enrichment



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## Elementary and Middle School Science Education Reform Partnerships

### Assessment

- Student achievement
- Teacher performance
- Reform progression





# ***Bristol-Myers Squibb BLAST***



## ***Elementary and Middle School Science Education Reform Partnerships***

### ***Community Support***

- Business and Industry
- Academia
- Government
- Non-governmental organizations
- Community leaders



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## **Elementary and Middle School Science Education Reform Partnerships**

### ***The Most Highly Valued Contribution***

#### **Time and resources of scientists and engineers**

- To model exemplary practice of scientific inquiry and exploration
- To assist teachers with facts and content
- To engage and stimulate students to develop a love for learning science
- To link educators to the business community, and provide familiarity with applied problem solving in the workplace

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*Where does this us lead in the future - We must:*

- **Accelerate reform: lin → log growth through amplification**
  - **Lower the fiscal threshold for implementation**
  - **Move beyond critical mass:**
    - Increase # of districts
    - Increase # of corporations
    - Increase government support
    - Increase public awareness
- lobbying + pressure on legislators

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## *Program Development - Challenges:*

- **Vision not shared among ALL stakeholders: Educators, Parents, Community leaders, Business/Industry, Legislators**
- **No or uncertain measurements of efficacy of intervention - Rol**
- **Ineffective partnerships - Lacking one or more of:**
  - Trust, openness, candor
  - Shared accountability and goal orientation
  - Long term commitment
  - Risk taking, Willingness to change

# *The Tipping Point*

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**We must demonstrate that  
our programs can make a difference  
for children everywhere**

