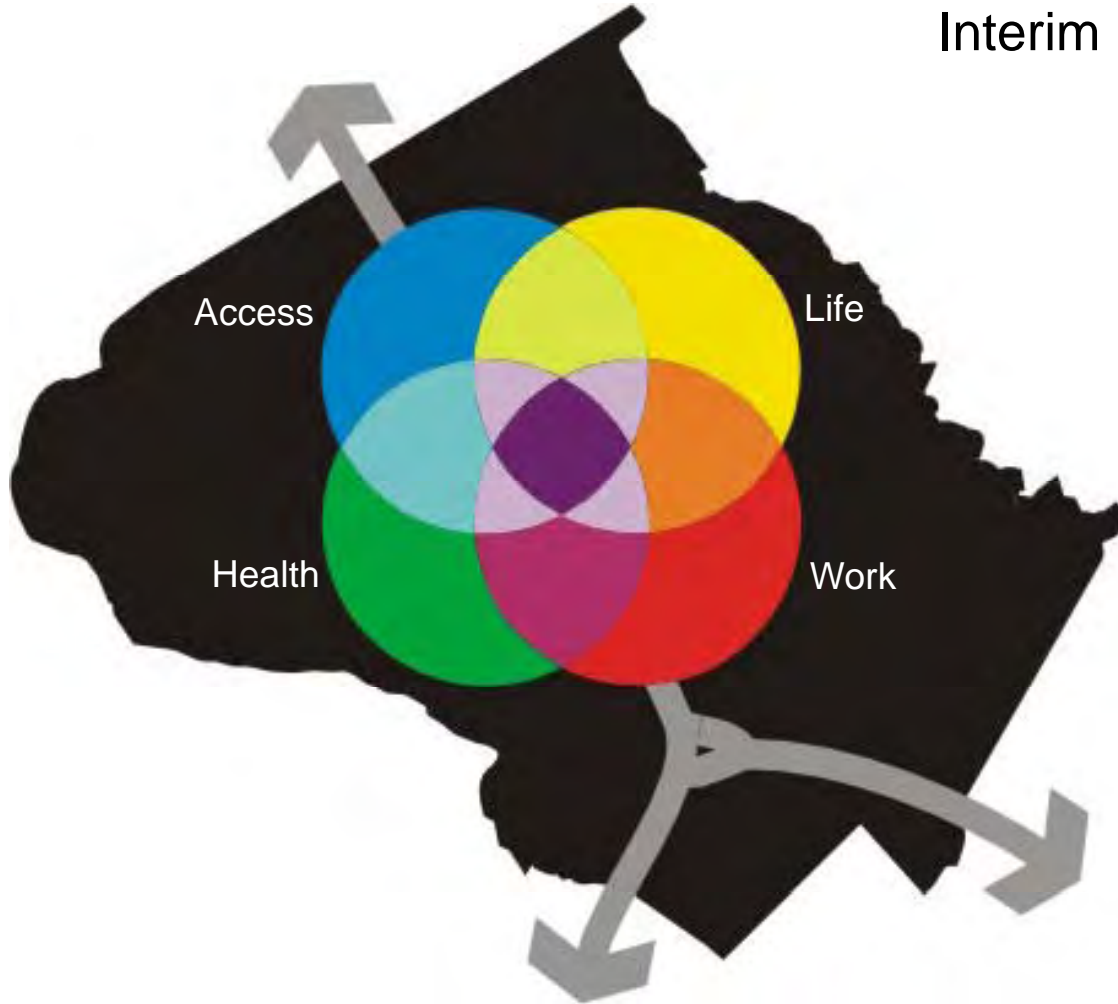


# THE 355/270 CORRIDOR:

Strategic Ideas for Sustaining a Livable Work Place

Interim Report July 9, 2007



# AGENDA

## 1. CORRIDOR STUDY BACKGROUND AND OUTLINE

## 2. PRESENTATIONS:

### **Preliminary Analysis: 355/270 Corridor Economy**

Marie Howland, Professor, Urban Studies and Planning Program  
University of Maryland, College Park

### **Advancing Science in Maryland**

David McDonough, Senior Director, Development Oversight

## 3. DISCUSSION:

### **Montgomery County Department of Economic Development**

Pradeep Ganguly, Director

### **University of Maryland**

Nariman Farvardin, Provost

### **Johns Hopkins University**

David McDonough, Senior Director, Development Oversight

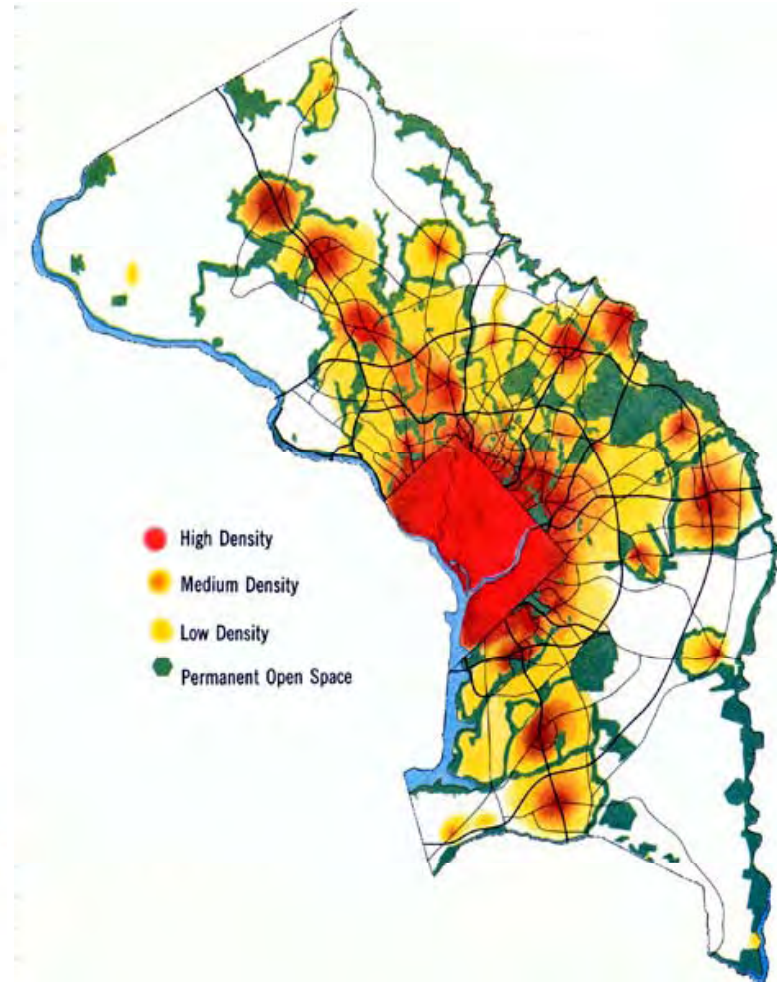
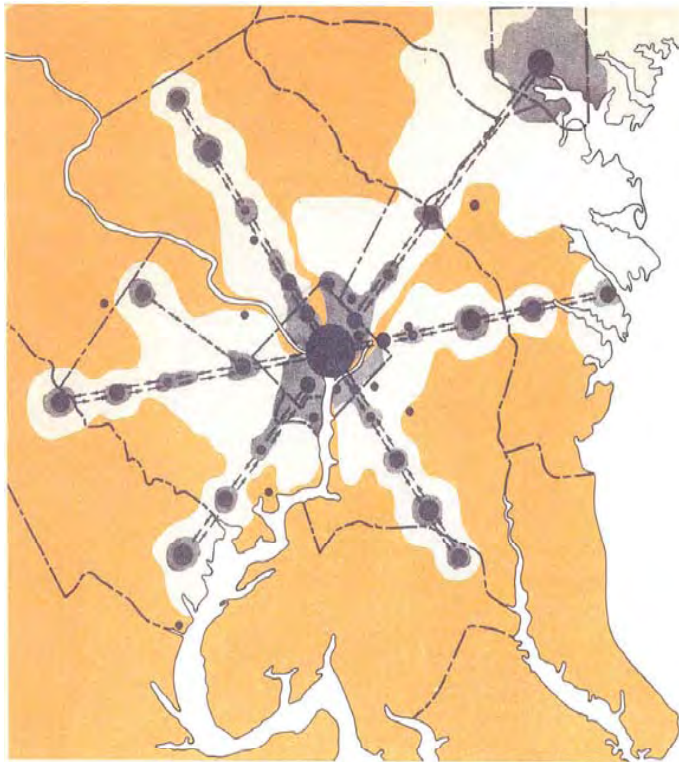
### **University of Maryland**

Marie Howland, Professor, Urban Studies and Planning Program

# THE GENERAL PLAN

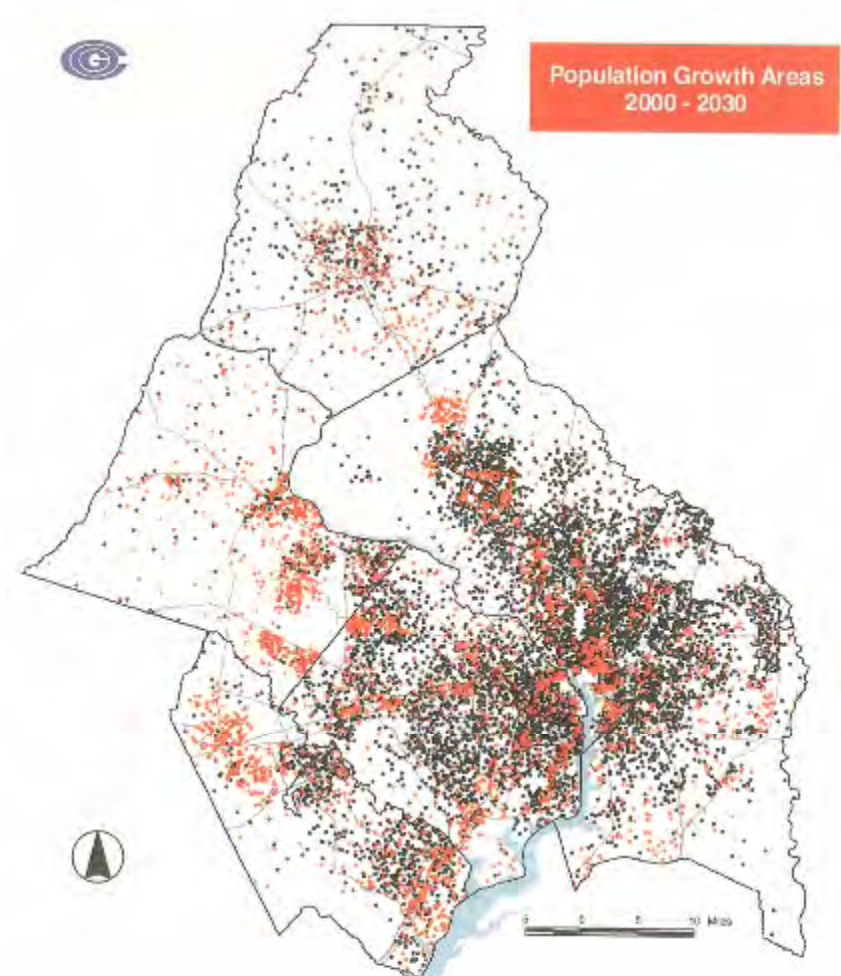
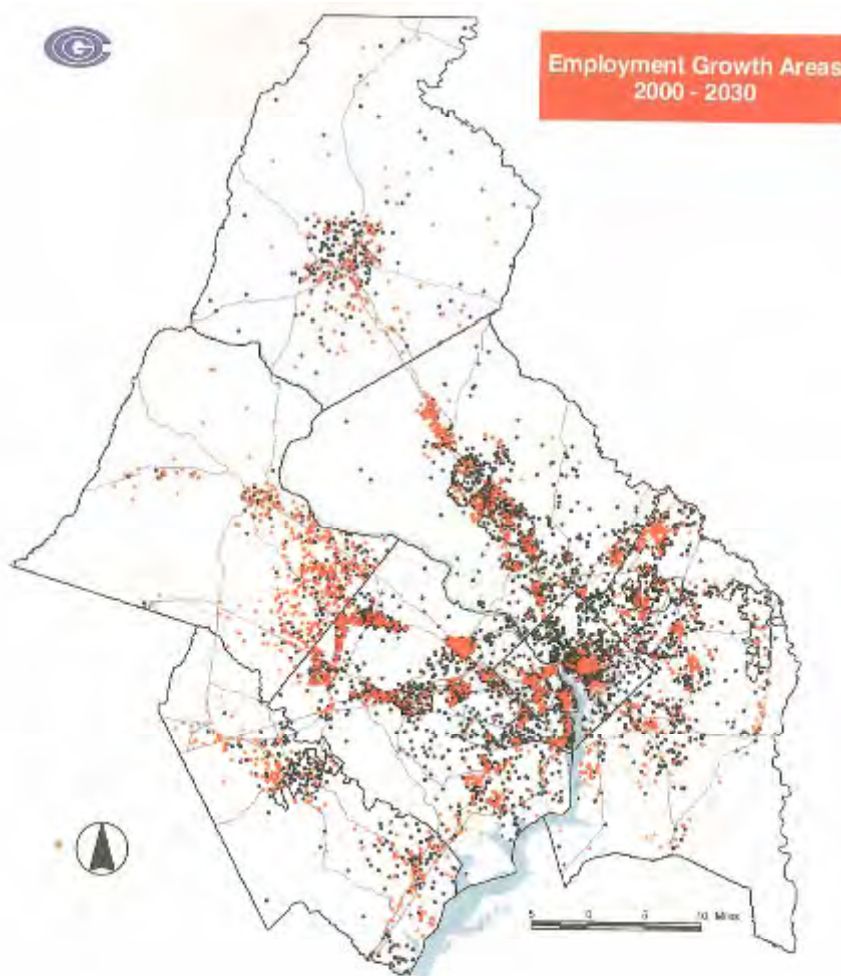
Wedges and Corridors

Adopted 1964, Approved 1969, and Refined 1993



# WEDGES AND CORRIDORS

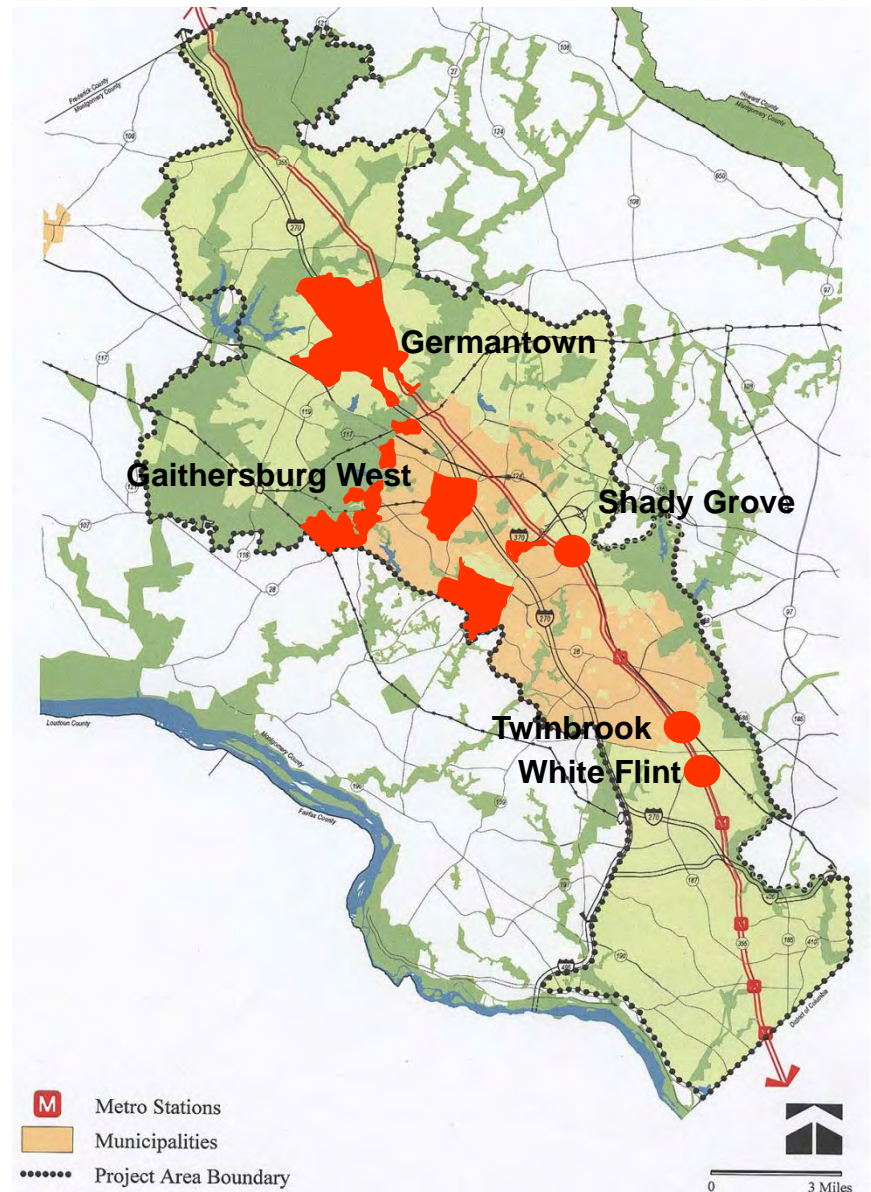
Experience and Expectations



# MASTER PLAN PROGRAM

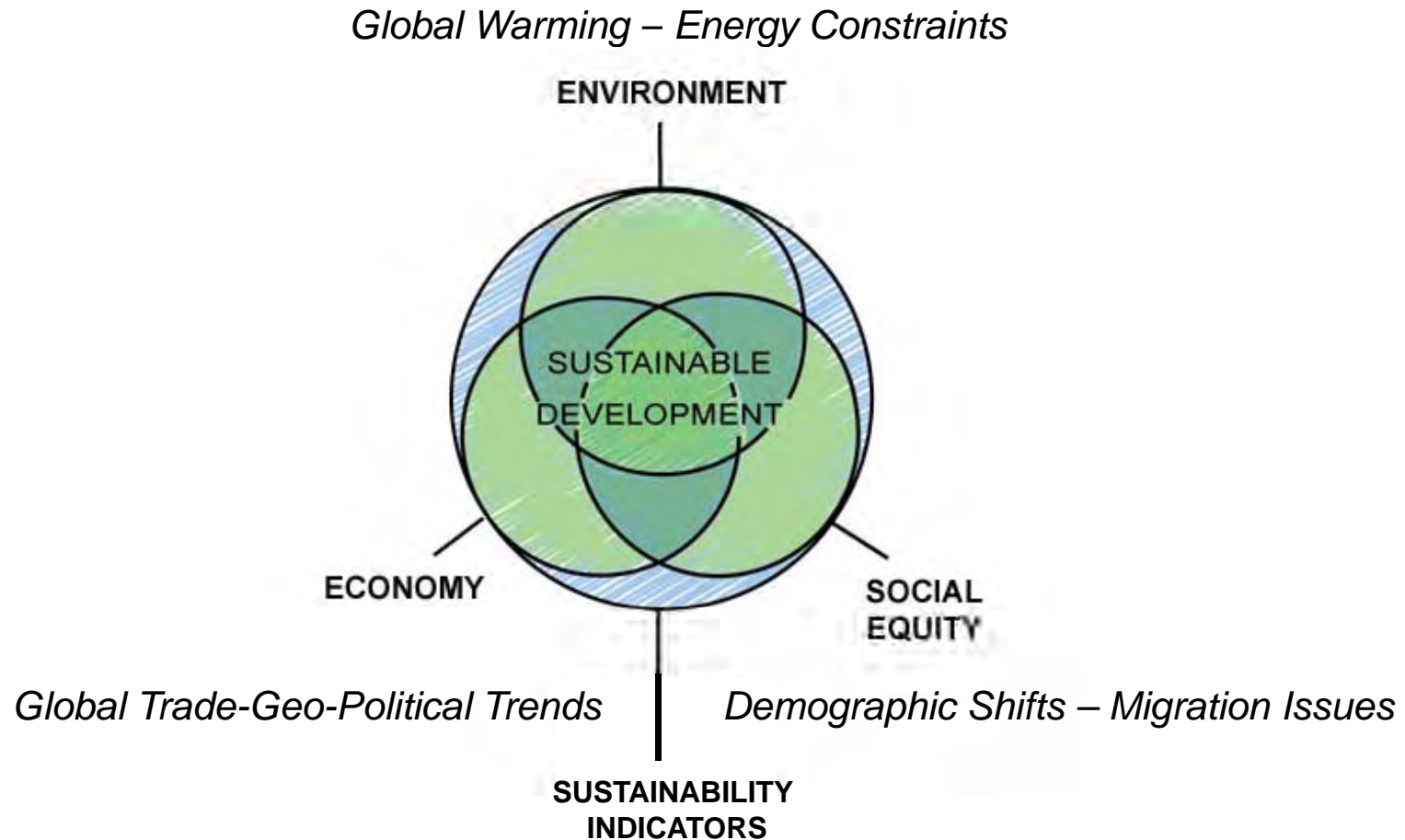
## Master Plans to be Updated :

- Shady Grove Sector Plan (Completed)
- Twinbrook Sector Plan
- White Flint Sector Plan
- Germantown Employment Corridor
- Gaithersburg West Vicinity



# SUSTAINABILITY

## A New Goal for the 21<sup>st</sup> Century



# CORRIDOR STUDY OUTLINE

## A People-Centric Approach to Analyzing the Corridor From Five Perspectives



1. **Work**  
Jobs, Labor Force, Investment, (Economy)



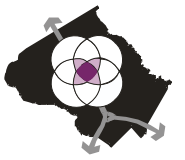
2. **Life**  
Housing, Shopping, Interacting, (Society)



3. **Access**  
Trips, Roads, Transit, Bikes, Walking, (Mobility)



4. **Health**  
Air/Water Quality, Active/Passive Recreation (Ecology)

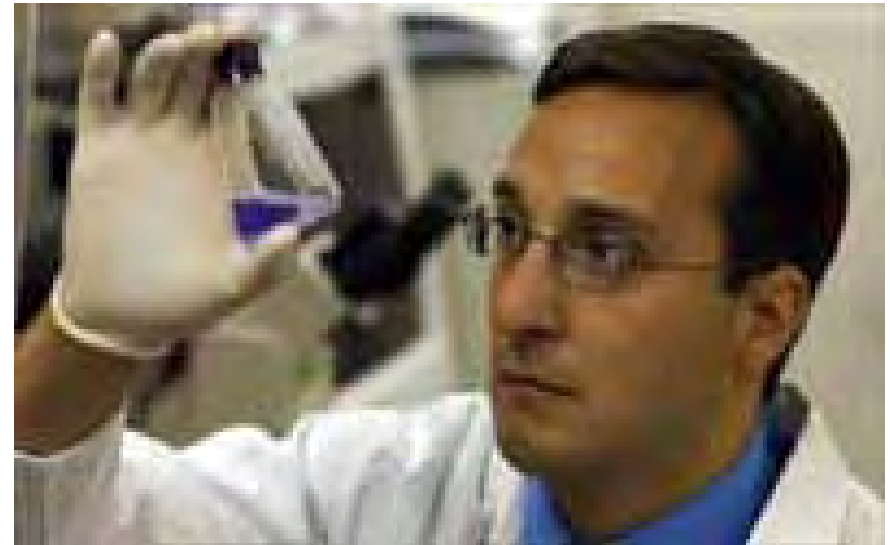
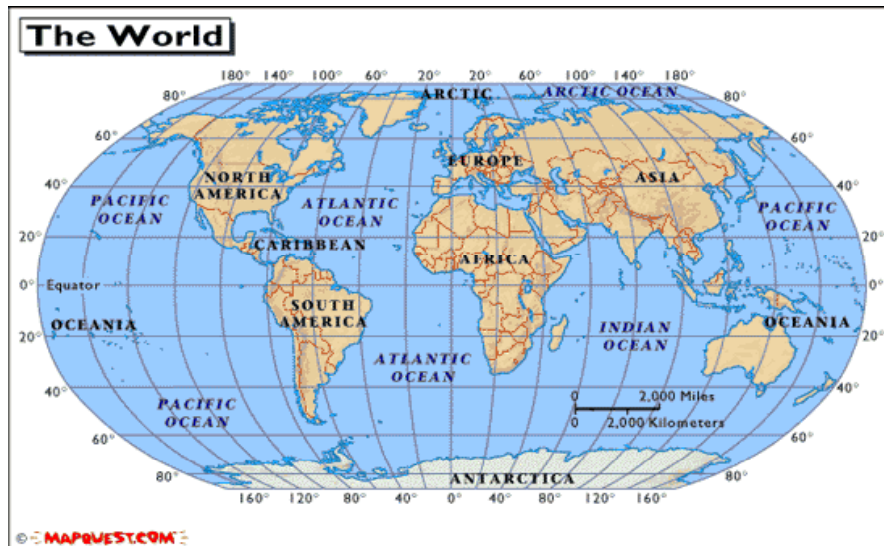


5. **Balance**  
Energy, Finance, Land Use and Design

# WORK

## PRELIMINARY ANALYSIS: 355/270 CORRIDOR ECONOMY

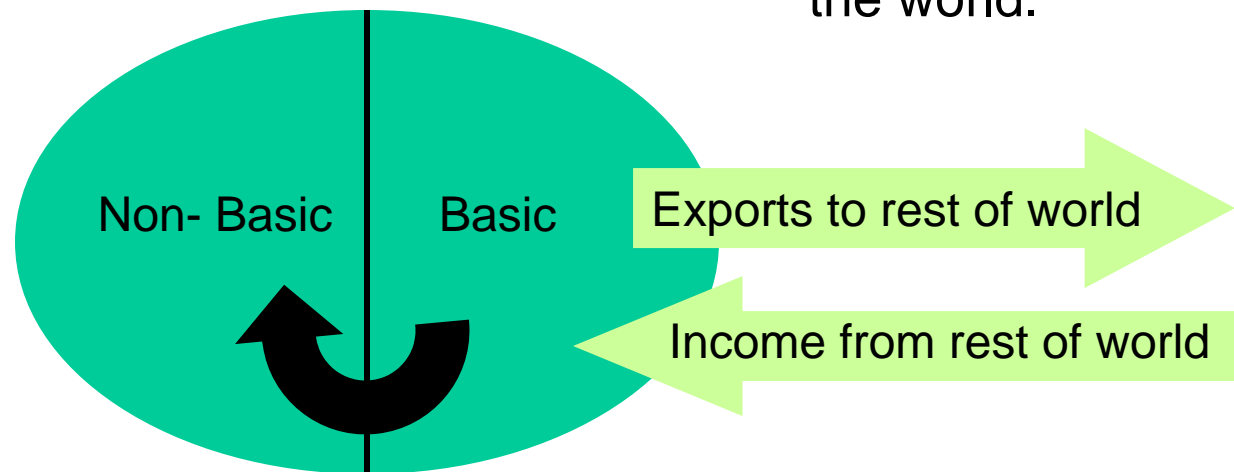
Marie Howland, Professor  
Urban Studies and Planning Program  
University of Maryland  
College Park, Maryland





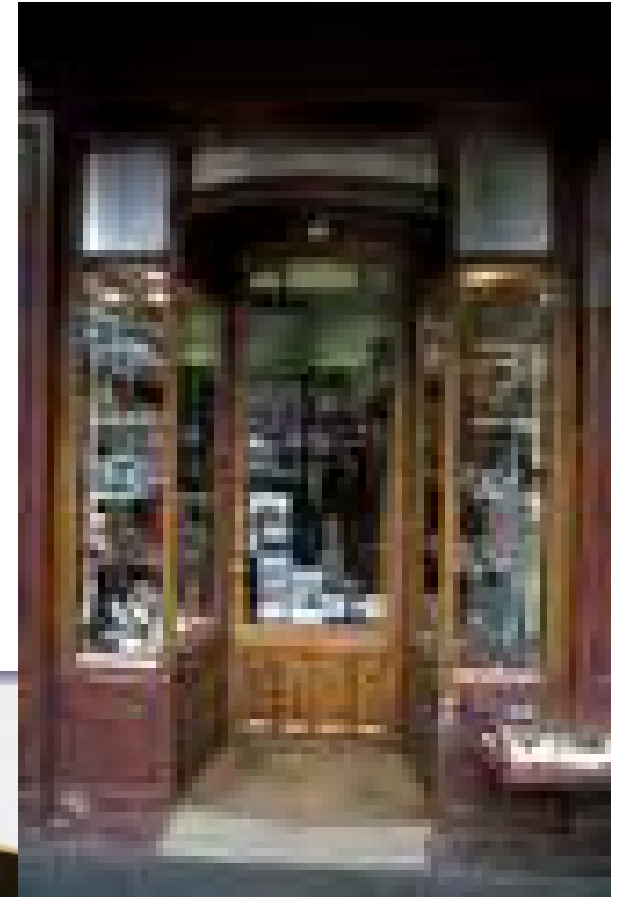
# Divide the Local Economy Into Basic and Non-Basic Sectors

- Non-Basic Sector:
  - The activities made possible by income from the basic economy
- The Basic Sector:
  - The activities that produce products and services that are exported to the rest of the world.



# Examples of Non-Basic Industries in Montgomery County

- Retail Trade
- Real Estate
- Arts and Entertainment
- Health Care and Social Assistance
- Local Government

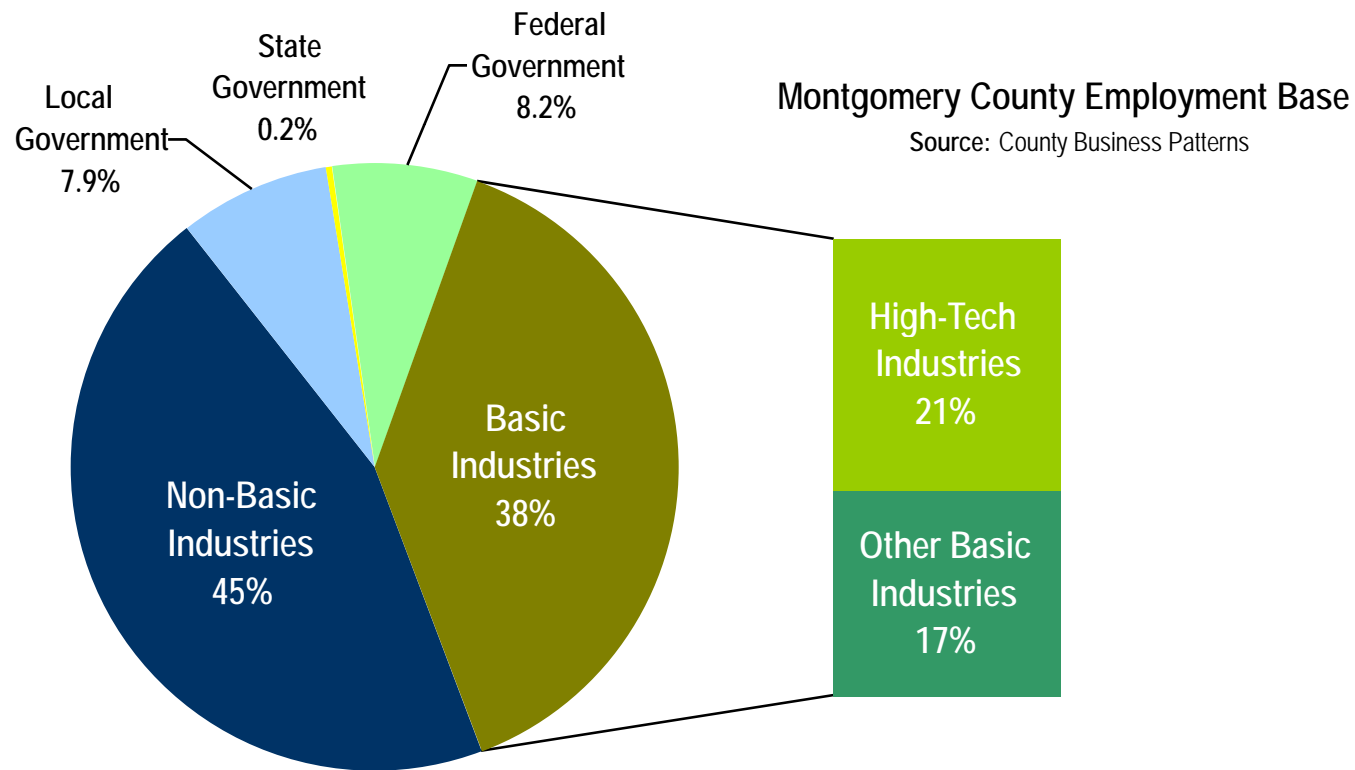


# Examples of Basic Industries in Montgomery County

- Scientific Research and Development
- Computer System Design and Related Services
- Pharmaceutical and Medical Manufacturing
- Corporate Services
- Associations
- Federal Government



# High Technology is Important to the Basic Sector in Montgomery County



Source: County Business Patterns and M-NPPC, 2005

# What is the High Technology Sector in Montgomery County?

- **Biotechnology** – The commercial application of living organisms or their products through deliberate manipulation of their DNA molecules
- **Information Technology (IT)** - Includes computer and telecommunications firms developing software, providing systems integration, designing websites, and providing internet services
- **Nanotechnology** – Ability to see, measure, and manipulate objects at the atomic scale. Nanotechnology can span all industries



# Montgomery County's High Technology is Important to the Nation

- Maryland ranks 4th in the nation in number of biotechnology firms.

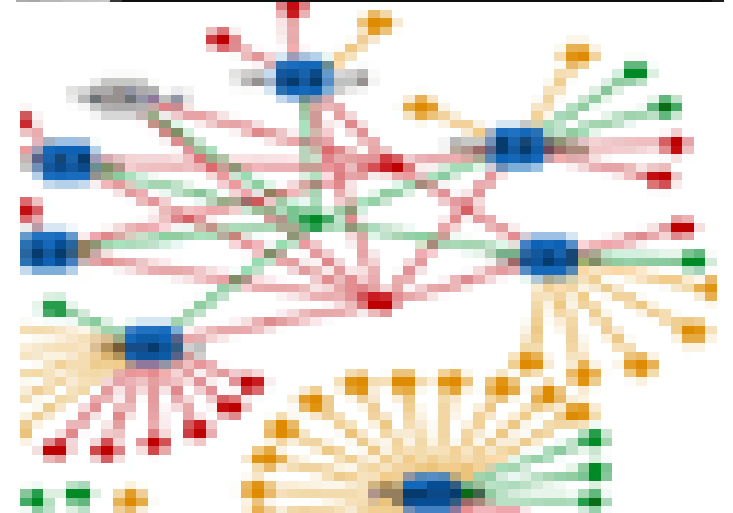
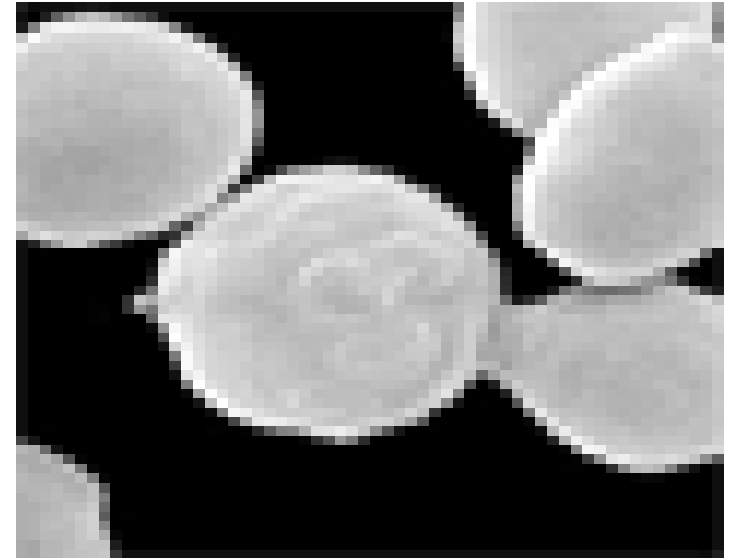
*(One-third of state's biotech firms are clustered in Montgomery County)*

- Maryland ranks 6th in the nation in IT employment.

*(One-third of state's IT workforce is employed in Montgomery County)*

- Maryland ranks 6<sup>th</sup> in nanotechnology research and development dollars

Sources: Sage Policy Group Report, Jan. 2005; The Biotechnology Industry in Montgomery County, MNCPPC, July 2000; Cortright and Meier, Brookings, Jan. 2001.



# Montgomery County's Role and Competitive Advantage in Biotechnology

- The high cost of land and the need for large parcels at the production phase, limits the County's competitiveness in the large scale manufacturing of components and drugs
- **Montgomery County's niche is in the research and development to prototype phase of biotechnology**



# Implications For Land Requirements

Our strength in research flourishes in compact high-density areas to foster collaboration. Montgomery County also needs adequate industrial and wholesale uses that support the biotechnology industry

*For example: scientific supplies and office equipment wholesalers*

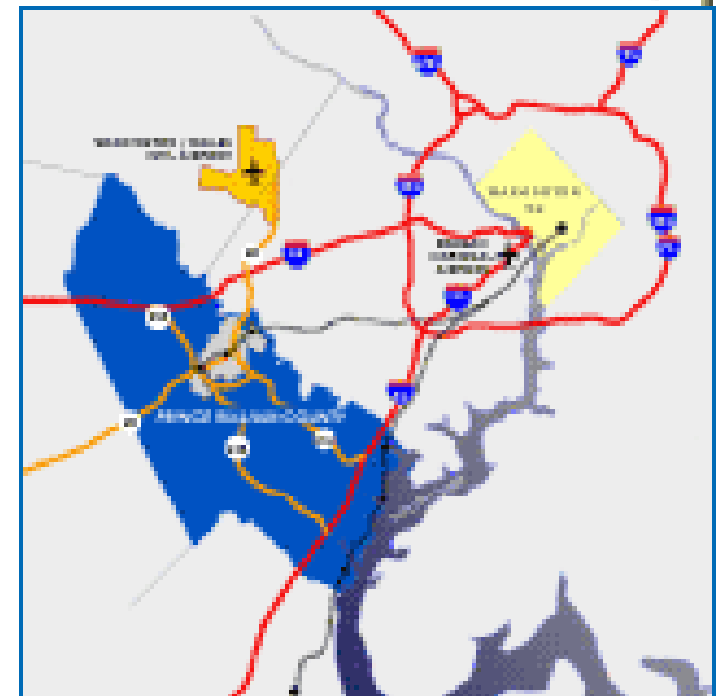
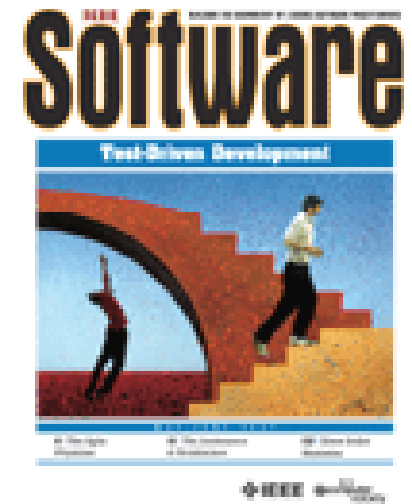




# Montgomery County's Role in IT:

- Montgomery County's strength is in software development, data processing, computer programming, and computer systems design and integration
- Smaller Firms
- Larger firms go to Northern Virginia where there are larger parcels of land
- Northern Virginia has one of the country's four network access points so they attract more and larger internet providers than Montgomery County

Source: The Information Technology and Telecommunications industry In Montgomery County, M-NCPPC, June 2001



# The Reasons Why the Biotechnology and IT Industries are Strong in Montgomery County

1. The federal presence and leadership in bioscience, IT and nanotechnology are the base for a world class center in these fields because of:

- NIH
- NIST
- Satellites for DHHS and DOE
- FDA
- Walter Reed Army Medical Center
- Bethesda Naval Hospital/Uniform Health Service



# The Reasons Why the Biotechnology and IT Industries are Strong in Montgomery County

## 2. Montgomery County's proximity to two major research universities:

- Johns Hopkins
  - *First in research and development expenditures in the U.S. for 26 years*
- University of Maryland
  - *UMD ranked as second best computer science program in the nation (Communications of the ACM, June 2007)*
- Both strengthened by their campus presence at the Shady Grove Life Sciences Complex



# The Reasons Why the Biotech and IT Industries are Strong in Montgomery County

## 3. A highly educated labor force:

- 2nd highest percent of residents with a Ph.D. among all counties in the U.S.
- 6th highest percent of residents with a masters degree
- 1st in the nation in the percent of residents with a professional degree

Source: M-NCPPC, June 2007



# The Reasons Why the Biotechnology and IT Industries are Strong in Montgomery County

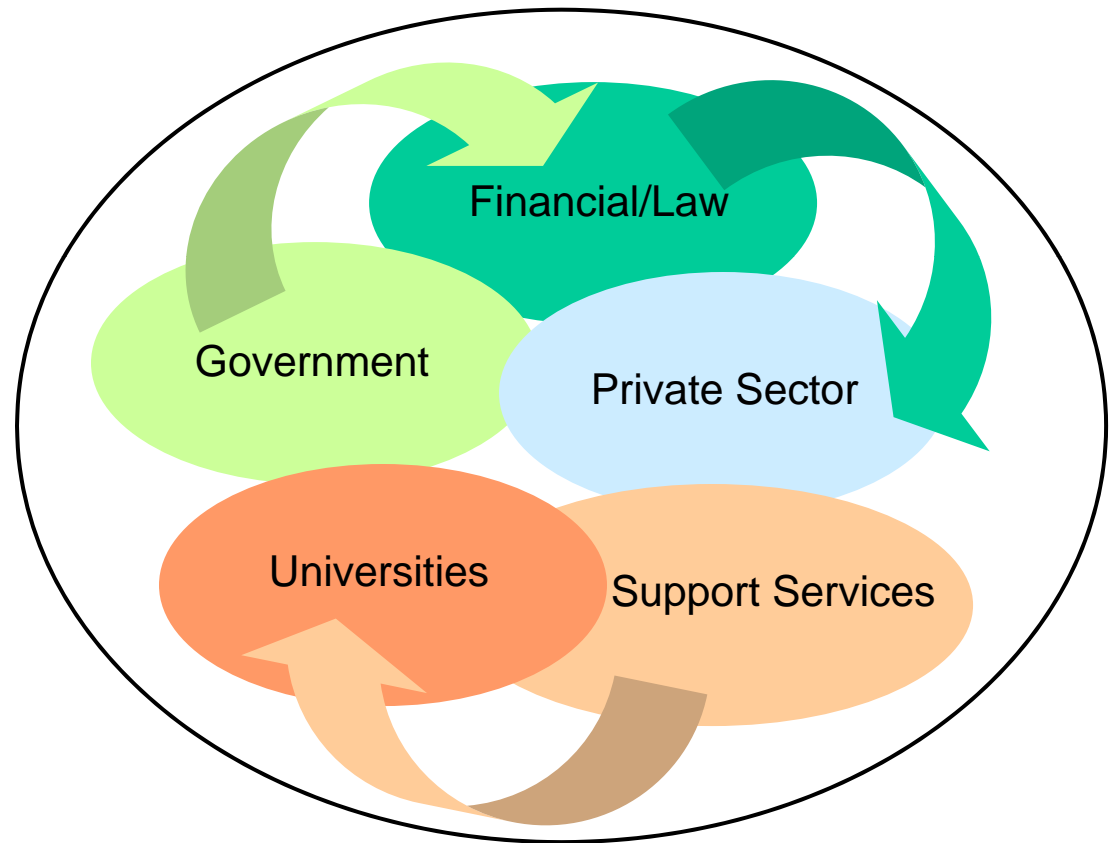
## 4. A high quality of life attracts people for working and living:

- Nationally recognized public schools
- Successful urban centers of Bethesda and Silver Spring
- Open space and parks
- Metro system
- Adjacency to Washington, D.C.



# What is an Industry Cluster?

- Clusters are agglomerations of interrelated activities that foster wealth creation in a region, principally through the export of goods and services beyond the region



# Key Elements of a Clusters

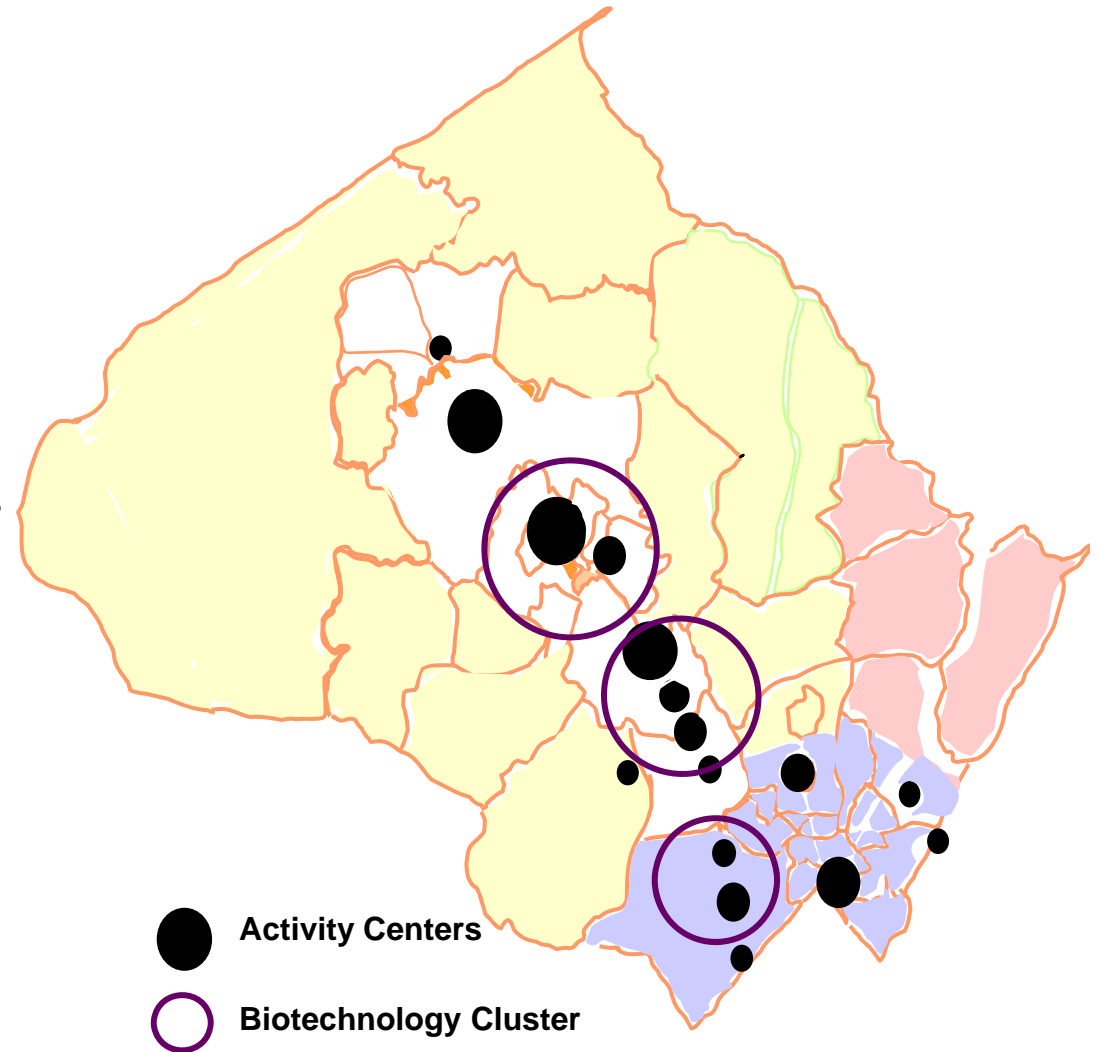
**Clusters are especially important in cutting edge sectors because they supply:**

- An educated and specially trained workforce
- A network of specialty suppliers and services
- Venture capital availability
- Expertise, and entrepreneurial capability
- Knowledge sharing



# The Importance of Clusters

- Innovative industries thrive where there are connections and linkages among firms, specialized suppliers, customers, and workers
- Continuous innovation requires a sharing of formal and informal information between firms and workers in the high tech industry
- This is the reason we see successful high-technology firms spatially concentrated





# To Remain Competitive Montgomery County Should:

## 1. Continue to foster social diversity:

- World class scientists come from all countries. Montgomery County must be a place welcoming to a diverse population of many ethnic and religious backgrounds
- Innovation occurs in environments where there is a cross breeding of different and unconventional ideas and knowledge



# To Remain Competitive Montgomery County Should:

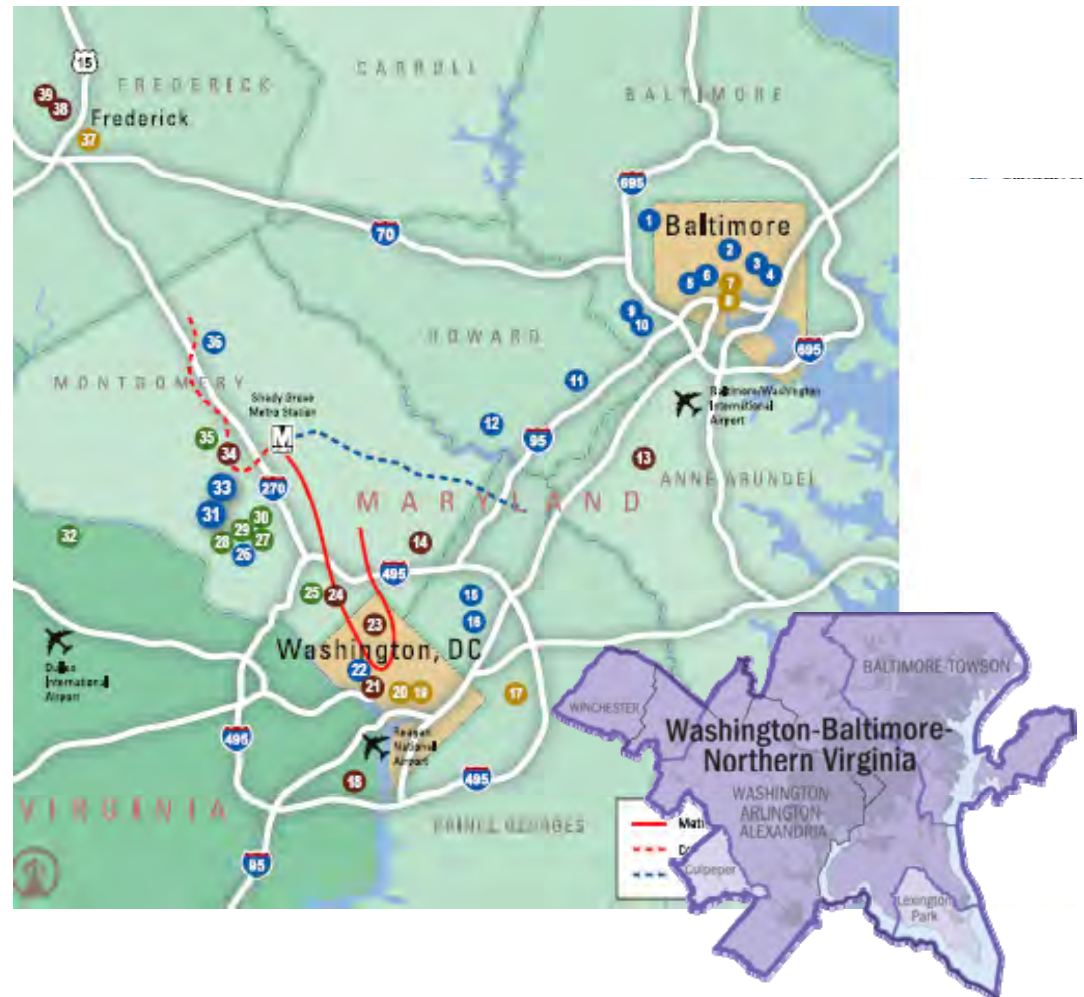
2. **Maintain a continued high quality of life for residents and employees**, including open space, good environmental quality, lively urban centers, and top schools



# To Remain Competitive Montgomery County Should:

## 3. Foster Connectivity and Accessibility:

- Within the high technology clusters in the county
- With high technology clusters in other Virginia and Maryland counties
- With other high technology around the country and world



# Advancing Science in the Baltimore Washington Region

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Translational Research in the 21st Century

WORK MODELS - July, 2007

David McDonough, Senior Director Development Oversight

# Advancing Science In Maryland

## Global Competition



## 52 Key Competitors

### North America (15)

- Austin, TX, USA
- **Baltimore/Washington, DC, USA**
- Boston, MA, USA
- Los Angeles, CA, USA
- Minneapolis / St. Paul, MN, USA
- Montreal, Canada
- New York/New Jersey, USA
- Philadelphia, PA, USA
- Research Triangle, NC, USA
- Rochester, NY, USA
- San Diego, CA, USA
- San Francisco, CA, USA
- Saskatoon, Canada
- Seattle, WA, USA
- Toronto, Canada

### United Kingdom / Ireland (5)

- Cambridge - SE England
- Dublin, Republic of Ireland
- Glasgow / Edinburgh, Scotland
- London, England
- Manchester / Liverpool, England

### Central America / South America (3)

- Belo Horizonte / Rio de Janeiro, Brazil
- Sao Paulo, Brazil
- West Havana, Cuba

### Continental Europe (8)

- BioAlps, France / Switzerland
- Biovalley, France / Germany / Switzerland
- Brussels, Belgium
- Helsinki, Finland
- Medicon Valley, Denmark / Sweden
- Paris, France
- Sophia-Antipolis, France
- Stockholm / Uppsala, Sweden

### Africa (1)

- Capetown, South Africa

### Mideast (1)

- Israel

### Asia (14)

- Bangalore, India
- Beijing, China
- Dengkil, Malaysia
- Hokkaido, Japan
- Hong Kong, China
- Hsinchu, Taiwan
- Hyderabad, India
- Kansai, Japan
- New Delhi, India
- Shanghai, China
- Shenzhen, China
- Singapore
- Taipei, Taiwan
- Tokyo-Kanto, Japan

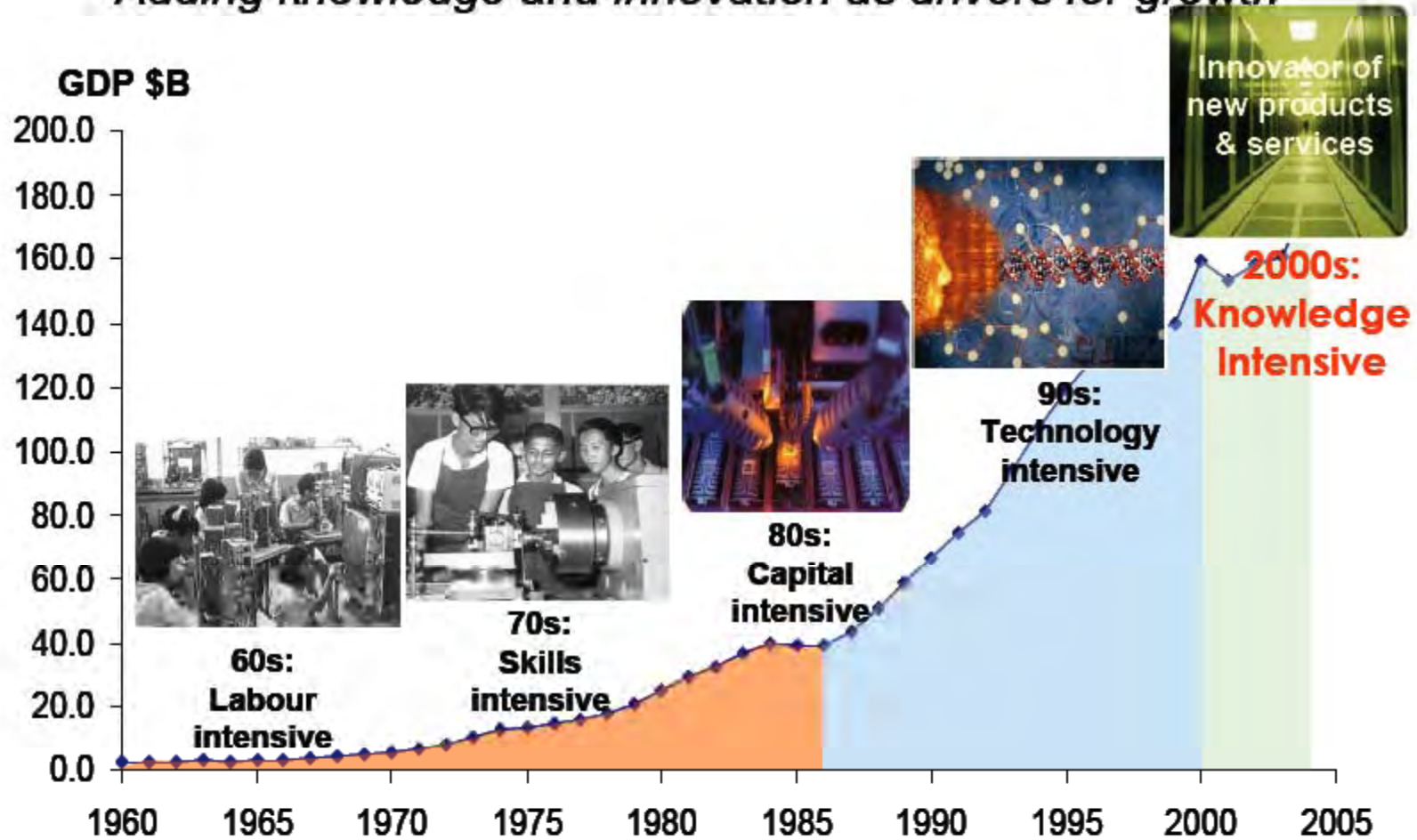
### Australia / New Zealand (4)

- Brisbane, Australia
- Dunedin, New Zealand
- Melbourne, Australia
- Sydney, Australia

## Global Competition – Case Study: Singapore (*Biopolis*)

### Singapore's industrial transformation

*Adding knowledge and innovation as drivers for growth*



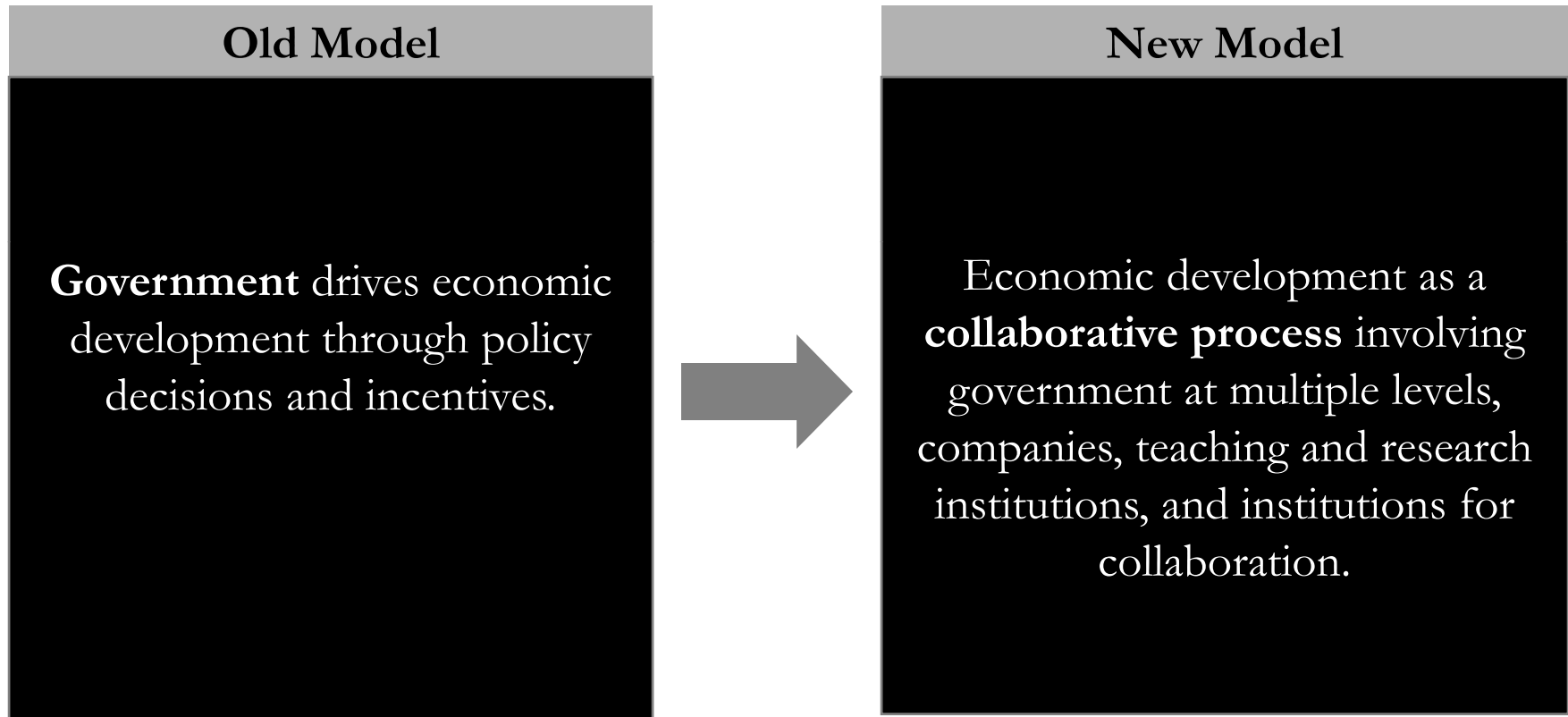
# Advancing Science In Maryland

## National Competition





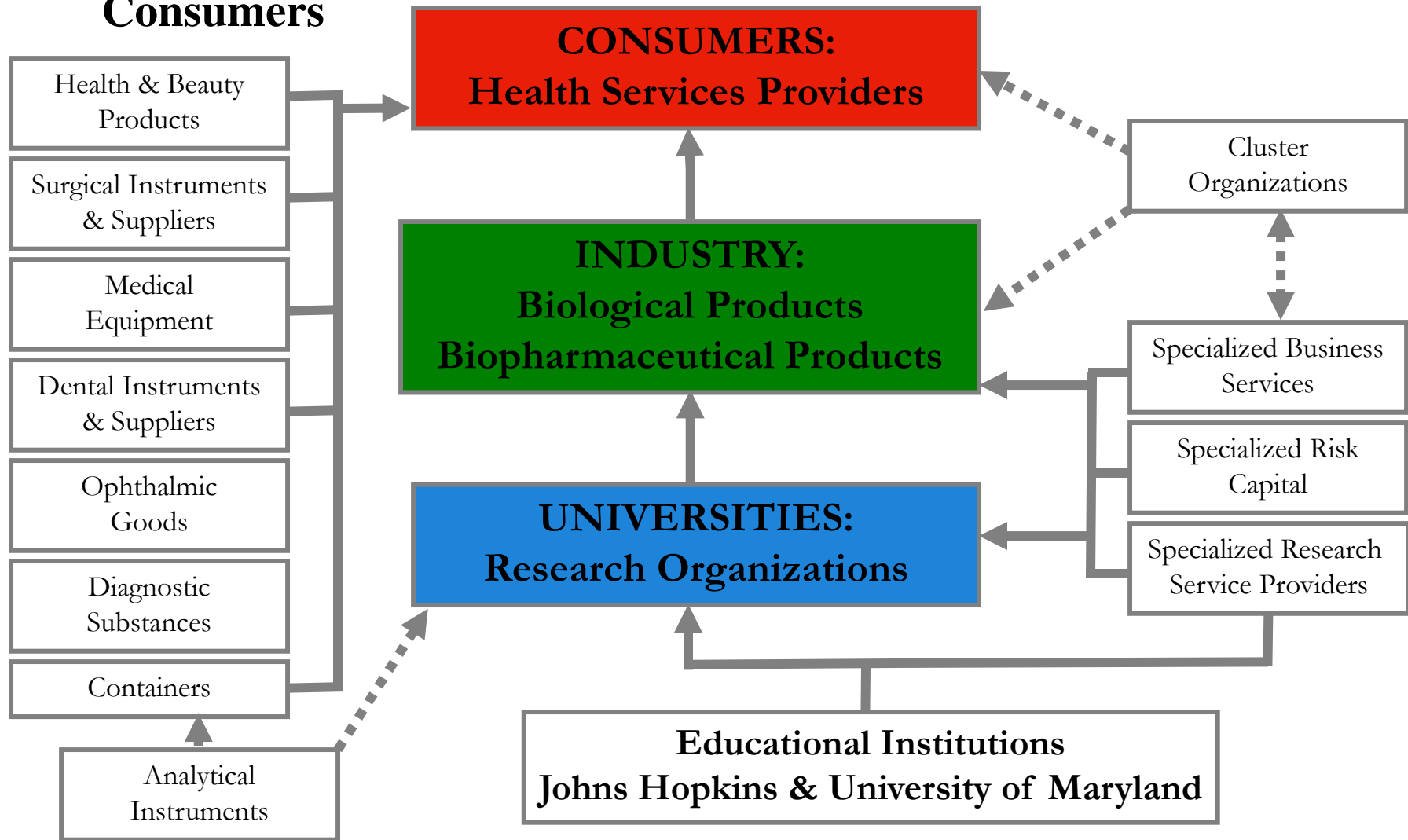
## Economic Development Models



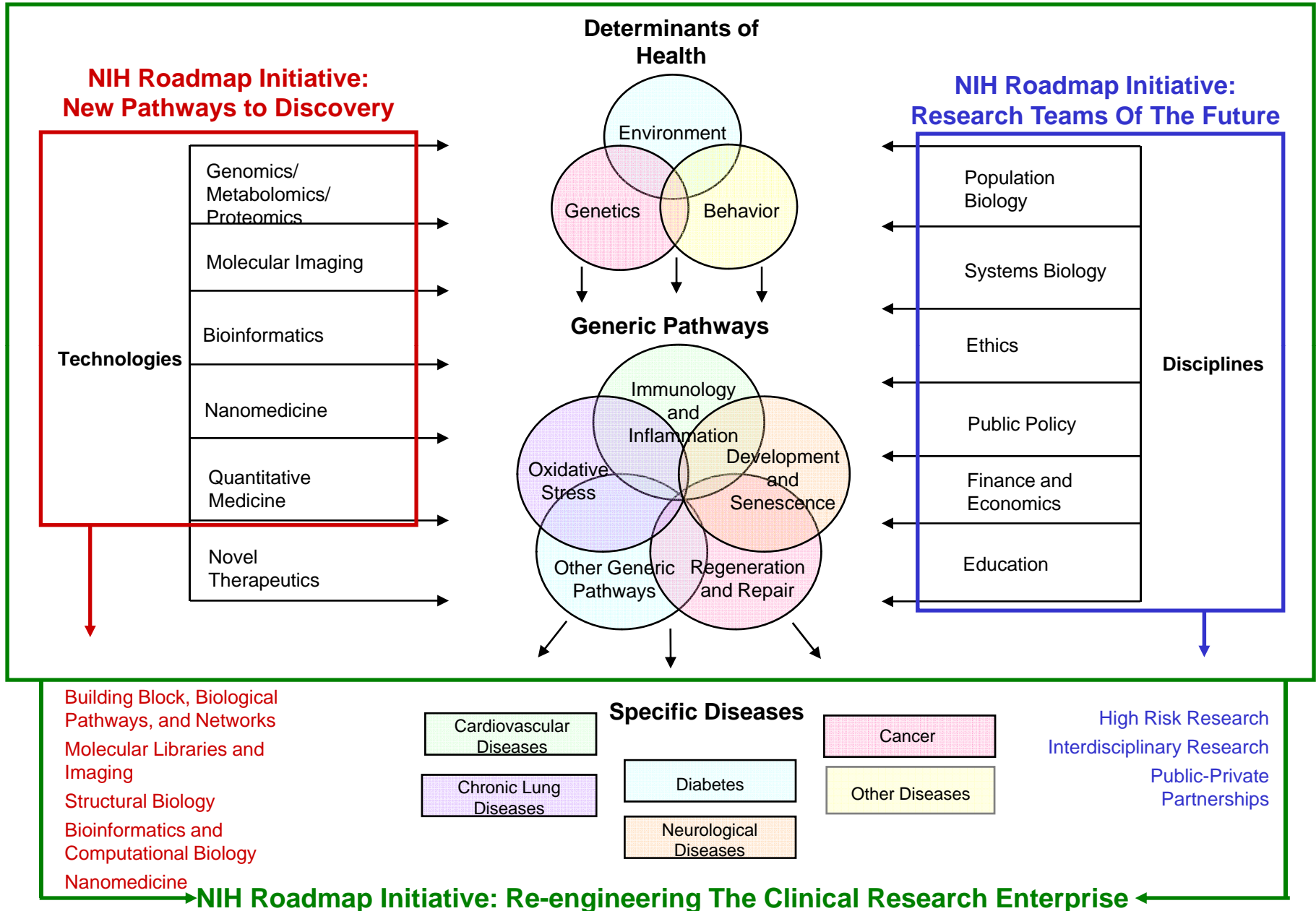
# Advancing Science In Maryland



**New Model = Translational Research: University – Industry – Consumers**



# Advancing Science In Maryland



## Questions to be Answered

### **Strategic Question: Do We Really Want to Compete In the World of Commercialized Science?**

- Tactical Question #1: Are we – **Universities, Industry, and Government** in Maryland – willing to work together and change our culture?
- Tactical Question #2: How do we get more private capital into the state and how do we get more entrepreneurial, private management capability?
- Tactical Question #3: Are we ready to engage a consultant to help us transform our economy like Mass. or Calif.?

# **DISCUSSION**