

## RESEARCH TRIANGLE PARK, NC



*Where the Minds of the World Meet*

# Globalization: Preparing for the next 50 Years The Knowledge Economy Implications for American Communities

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IBM Business Consulting Services/Global Location Strategies

January 24, 2006

## **Key questions for today's discussion**

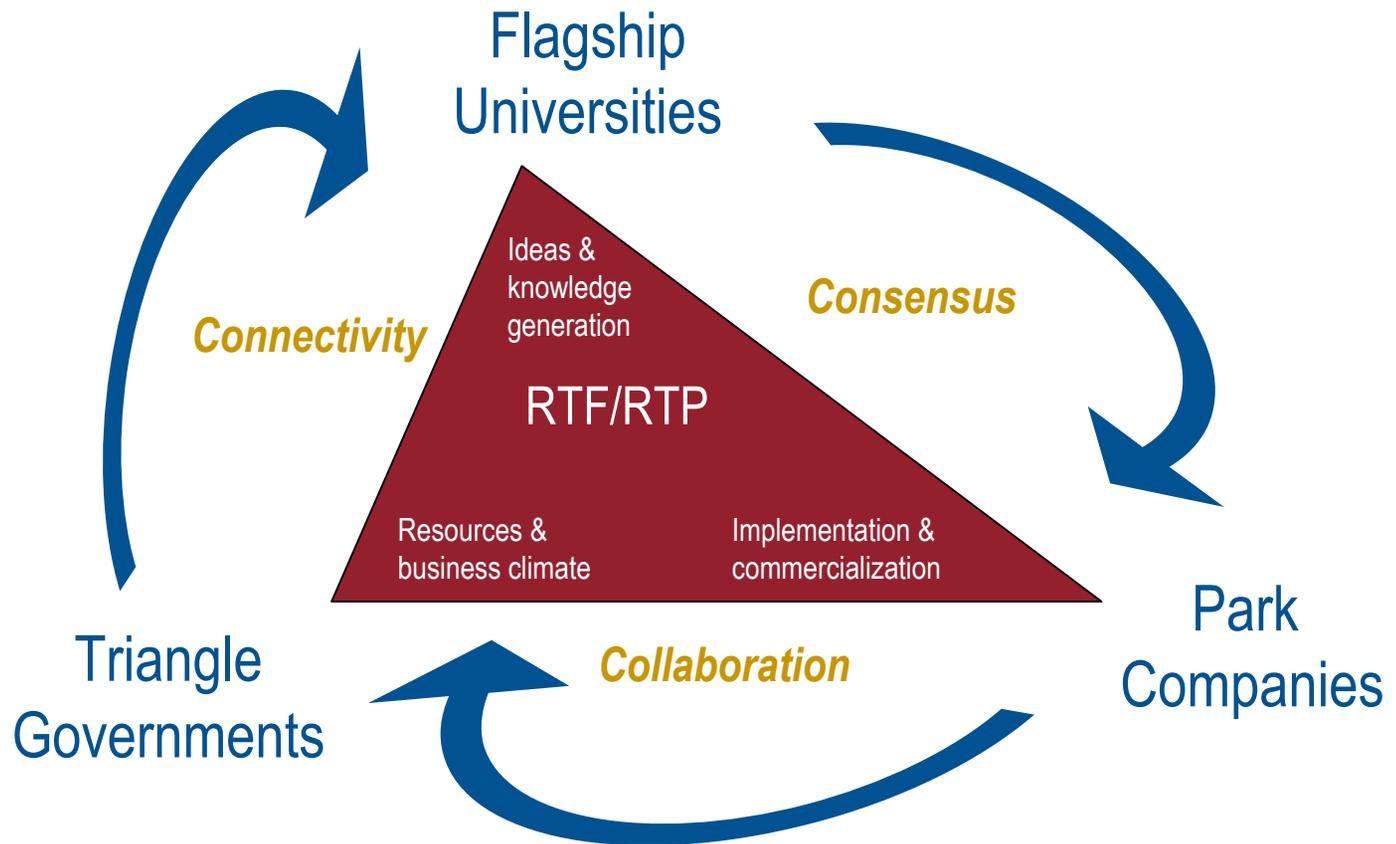
As RTP approaches its 50-year anniversary in 2009...

- What has RTP learned about globalization?
- How has globalization impacted the competitive environment?
- What are the new rules of the game?
- What can communities do to improve their position?

## ***Or more simply and to the point...***

*How do we prepare for the next 50 years in a  
global knowledge economy?*

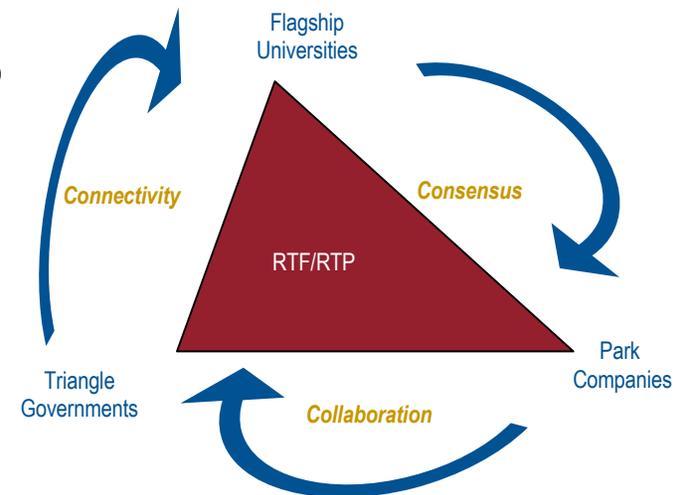
## Triangle Innovation Project



## Triangle Innovation Project

### Focus of the Analysis

- Identify key best practices and capabilities from around the globe that will enable the Foundation to reach its goal
- Determine the gaps between the Foundation's current state and what is required to achieve its goal
- Identify actions the Foundation can take to close the gaps identified



## The Research Triangle Region

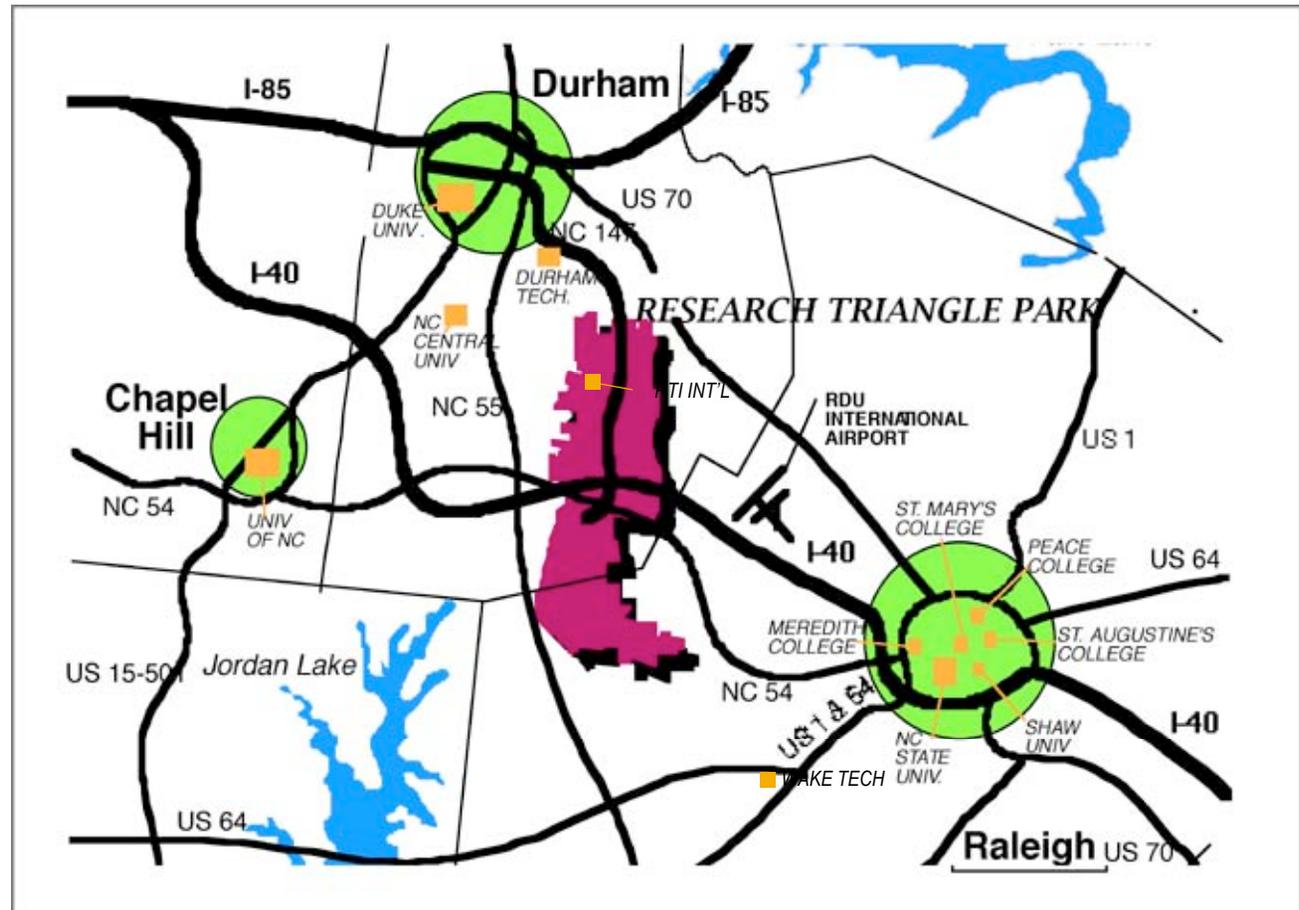


**Raleigh, Durham and Chapel Hill, NC**

## Research Triangle Park: Strategically Located at the Region's Core

### Knowledge Assets

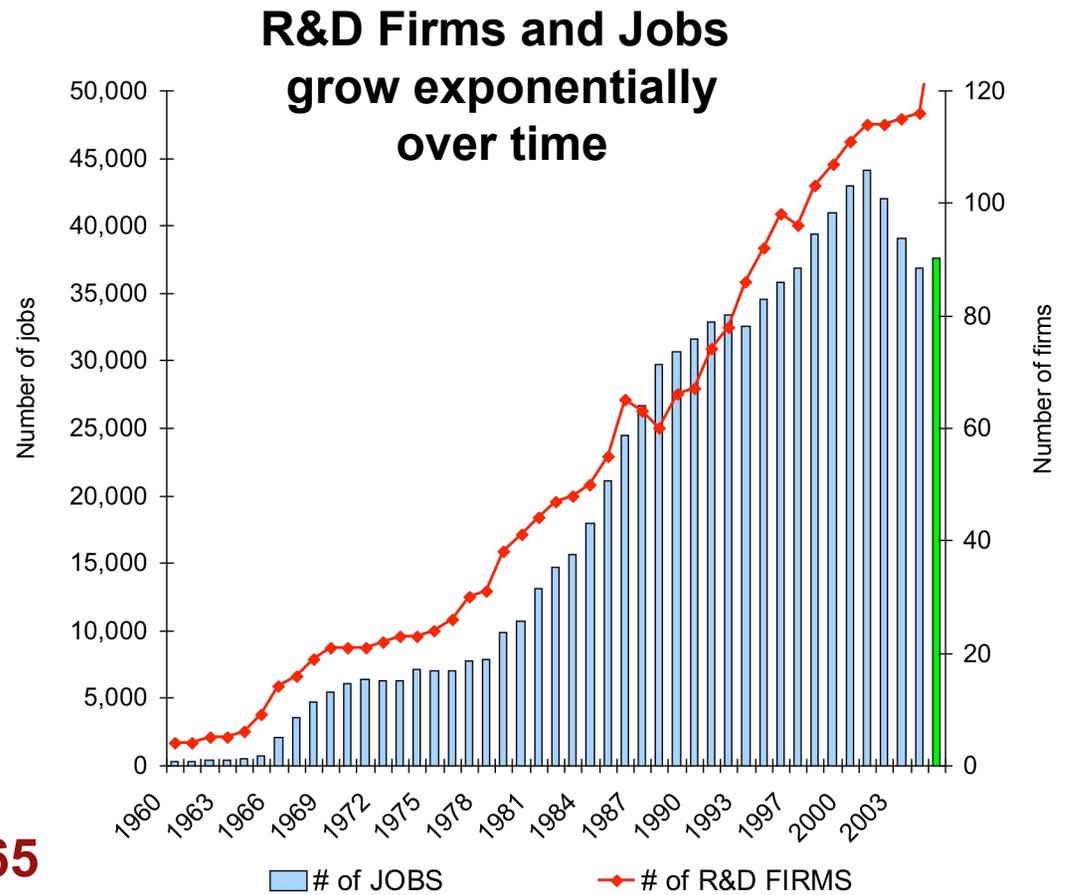
- Duke University
- Durham Technical Community College
- Meredith College
- NC Central University
- NC State University
- Peace College
- RTI International
- St. Augustine's College
- Shaw University
- UNC-Chapel Hill
- Wake Technical Community College



## Research Triangle Park --- Historical Growth

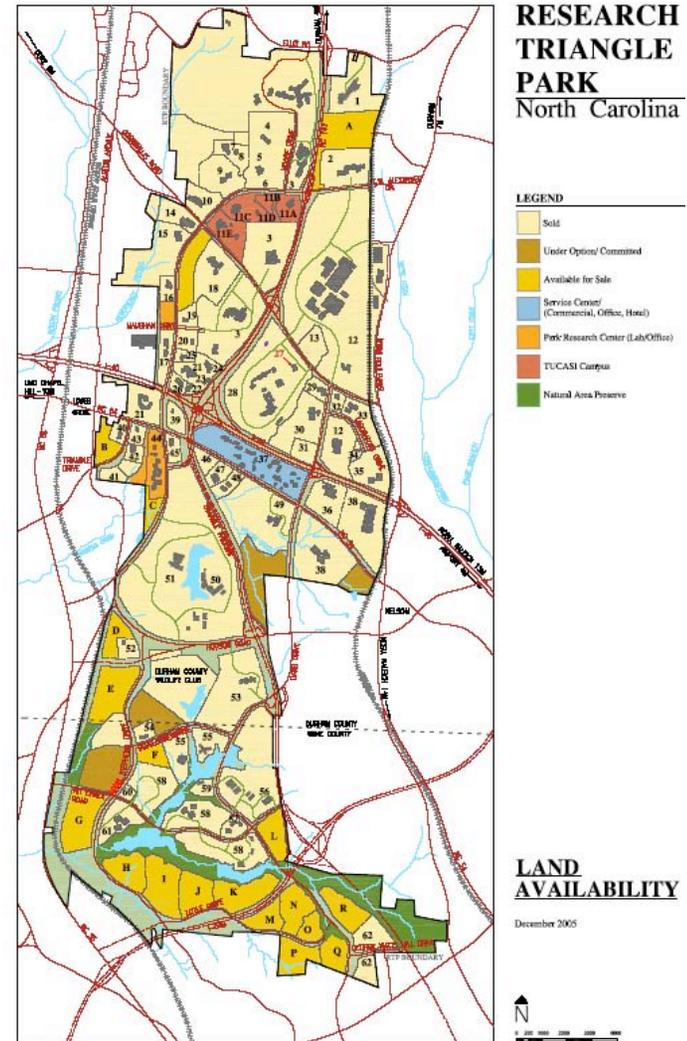


**IBM Opens RTP Facility in 1965**



## Research Triangle Park Today

- 7,000 acres
- 136 companies
- 20 million sq ft
- 37,600 employees
- Total payroll of over \$2.7 billion
- All 100 counties in NC have connections to RTP companies



# Research Triangle Park Companies

*Sample of Park companies by industry sector*

## IT/Informatics/Telecommunications (22%)

- Cisco Systems
- IBM
- Sony Ericsson

## Miscellaneous (22%)

- Credit Suisse First Boston
- RTI International

## Pharmaceutical/BioPharmaceutical/Medical Devices (20%)

- Biogen IDEC
- Diosynth Biotechnology
- GlaxoSmithKline

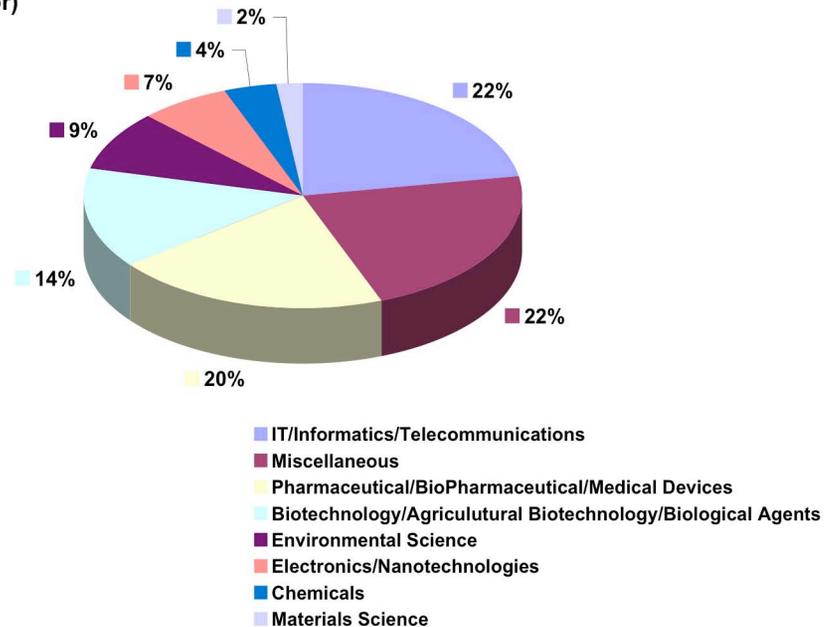
## Biotechnology/Agricultural Biotechnology/Biological Agents (14%)

- BASF

## Environmental Science (9%)

- US EPA
- NIEHS

Distribution of Park Companies (by Industry Sector)



## Electronics/Nanotechnologies (7%)

- DuPont

## Chemicals (4%)

- Reichold

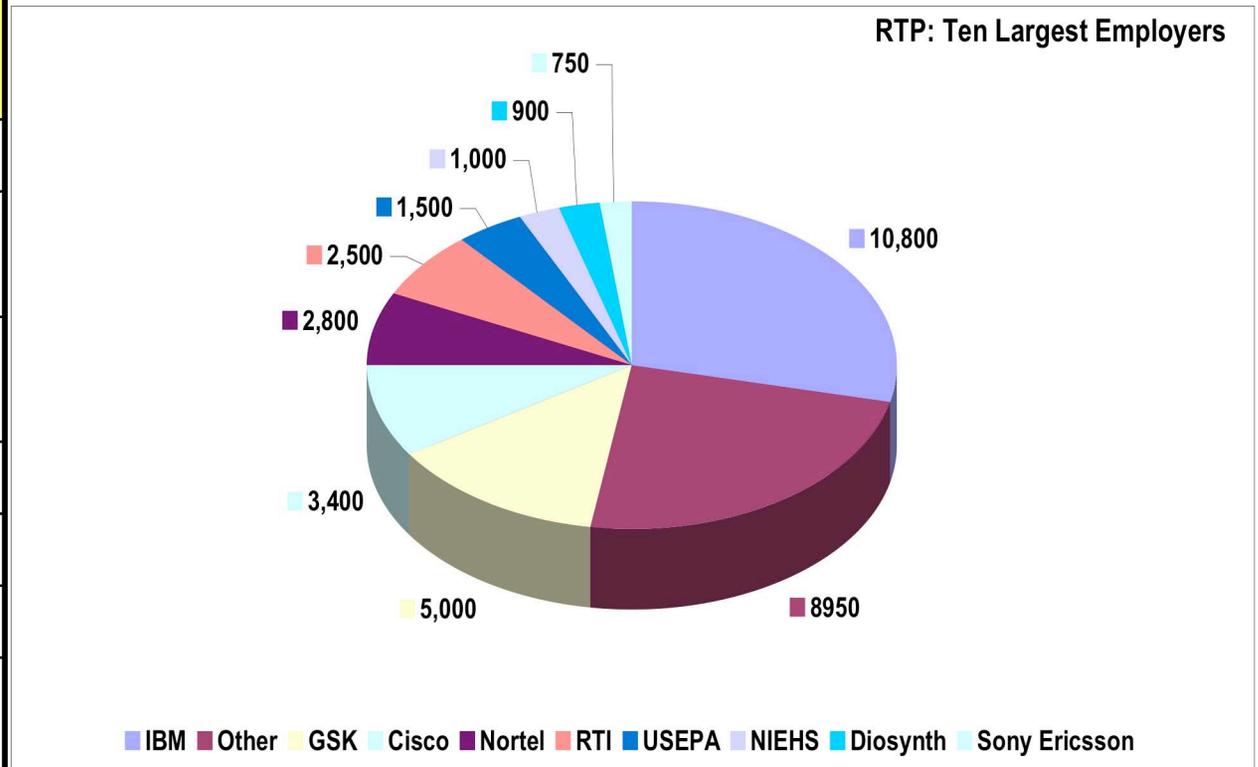
## Materials Science (2%)

- Bekaert Corporation

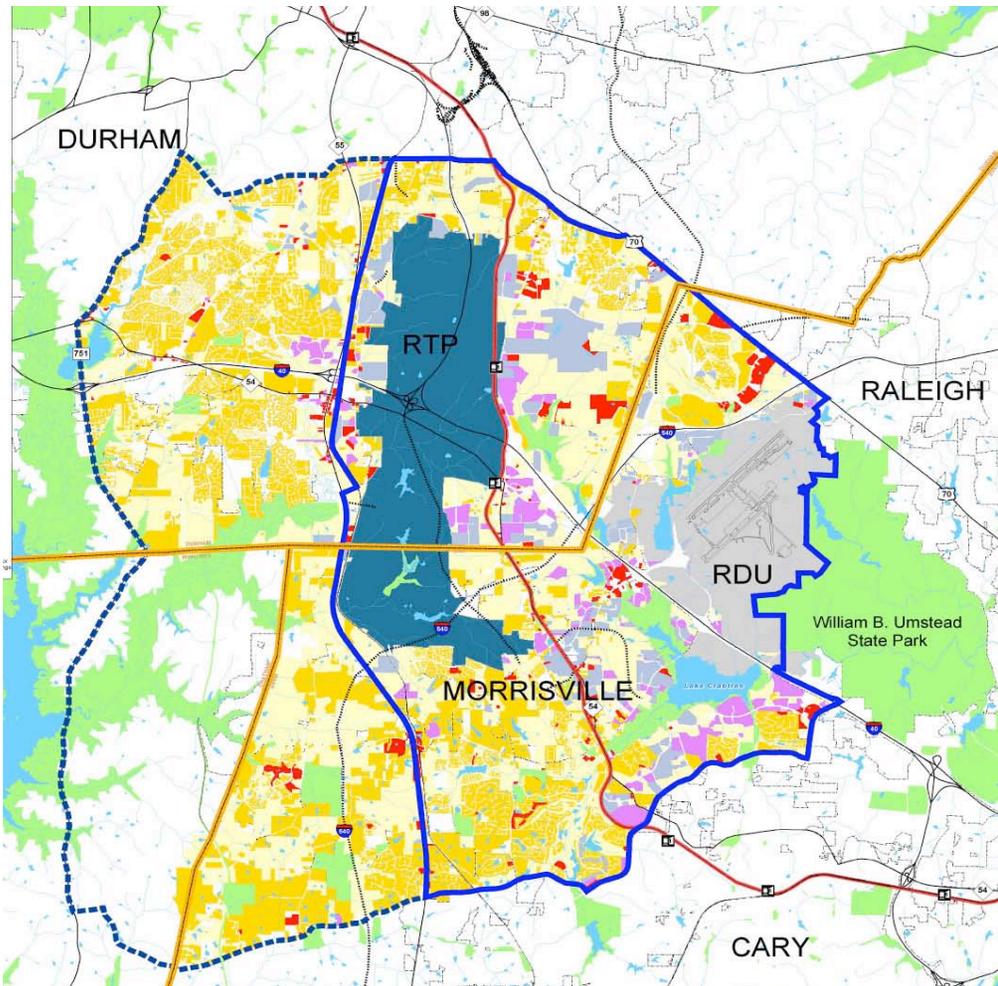
# Research Triangle Park Companies

*Distribution of companies by number of employees*

# of Employees	# of Park Companies
>10,000	1
5,000 - 10,000	1
1,000 - 5,000	6
500 - 1,000	5
250 - 500	8
<250	115
<b>Total Employees = 37,600</b>	<b>Total Companies = 136</b>



## Challenge 1: From the middle of nowhere...to the center of everything



■ RTP ■ Office ■ Industrial ■ Retail ■ Residential ■ Vacant

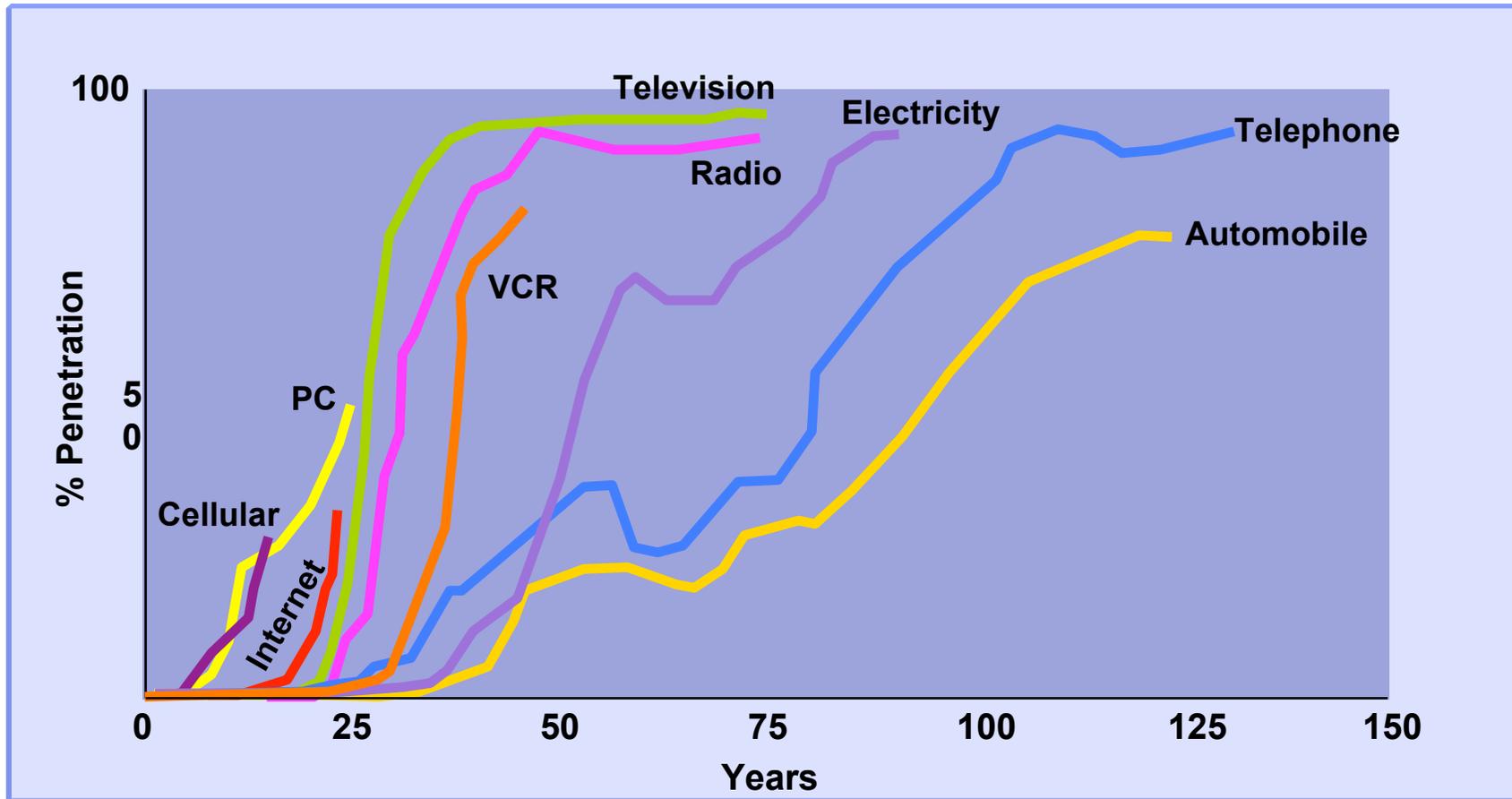
Four decades of RTP success has stimulated tremendous growth and development in the core of the Triangle region.

- 70,000 acres in the 4-mile sphere of influence around the Park
- 13 million sq ft built space
- 15,000 acres under development\*
- 14,500 acres in residential development
- 37,000 housing units

\* Includes office, commercial, retail, & industrial

## Challenge 2: Access to Innovation is Accelerating

*Measured by Speed of Market Penetration*



Joseph Jacobsen, "Organizational and Individual Innovation Diffusion"

## Challenge 3: Globalization... Now a single industrial production system

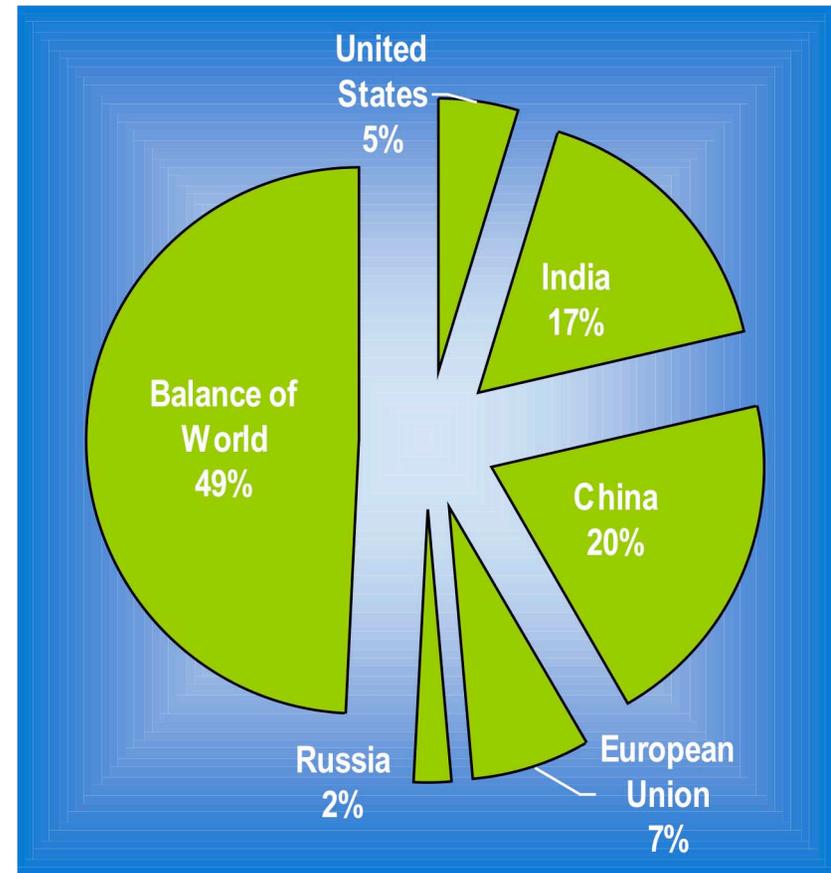
- The system of networked production has an extreme degree of specialization.
- It evolved naturally from the system wide outsourcing that grew over 25 years.
- This new system is extremely efficient and profitable to shareholders and has helped increase the American standard of living by more than 10 percent.
- But negatives and risks exist – Transnational companies are now very capable of extracting wealth from lesser firms, and from small and desperate states, and even from individual customers and citizens.
- Extreme specialization also brings extreme risks and vulnerabilities.

*In Sept. 1999, an earthquake devastated much of Taiwan, toppling buildings, knocking out electricity, and killing 2,500 people. Within days, factories as far away as California and Texas began to close. Cut off from their supplies of semiconductor chips, companies like Dell and Hewlett-Packard began to shutter assembly lines and send workers home. A disaster that only a decade earlier would have been mainly local in nature almost cascaded into a grave global crisis. The quake, in an instant, illustrated just how closely connected the world had become...*

*Barry C. Lynn in "The End of the Line"*

## Challenge 4: Globalization...New players = New challenges

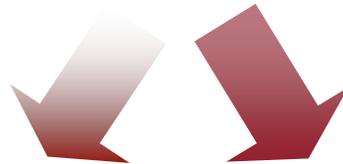
- 90% of the world's scientists & engineers will be Asians working in Asia by 2010.
- A manufacturing worker in China is paid 75 cents per hour, yet they are worried about losing labor intensive jobs to Indochina.
- A software programmer making \$66,100 in the US would be paid \$10,000 in India. An Indian accountant earns \$5,000 per year.
- Indian workers answer phones for American companies, write software, read MRIs, fill in tax forms, process mortgages, manage orders, handle insurance claims, create PowerPoint presentations, and even color in cartoons.
- In Bangalore, more than 110,000 Indians work for Americans, while in all of India, the number is more than 350,000... and is predicted to top 1 million by 2008.



**Today almost 40% of world  
Population lives in China and India**

## Reality

***As the economy rebounded from the 2001-02 recession and faced new, intensified global competition, the Foundation Leadership recognized that RTP was at a Turning Point***



- **Finish Park to Build-out**
  - 1,000 acres remaining
  - Infrastructure in place

- **Respond to new challenges**
  - Globalization & hyper-competition
  - Innovation & technology acceleration

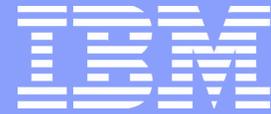


**Build upon the 50 year legacy  
and transform the Park**

## Research Triangle Park Tomorrow: A Clear Future “Vision”

- **Vision**... A better life for all North Carolinians through sustainable knowledge and technology-based development that effectively balances human needs and humanities with economic opportunities
- **Mission**... To promote university, academic, industry and government collaborations leading to the establishment and maintenance of research, scientific and technology-based facilities within the Triangle and North Carolina, creating quality jobs and opportunities for citizens.

**Goal**... *By the year 2020, the Research Triangle Foundation will lead RTP and the Triangle to become the world's leading regional center of innovation, technology commercialization and quality job creation*



Business Consulting Services  
Plant Location International

# Triangle Innovation Project Project Origins

## TIP Project Origins

- Build on existing IBM GILD and benchmarking work
- Identify Best practices

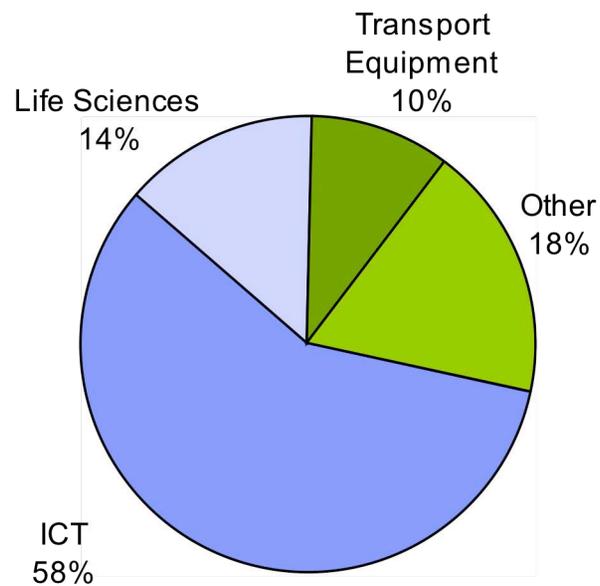
## GILD – Global Investment Locations Database

### Development investment flows by destinations selected (inward investment) and investor origin

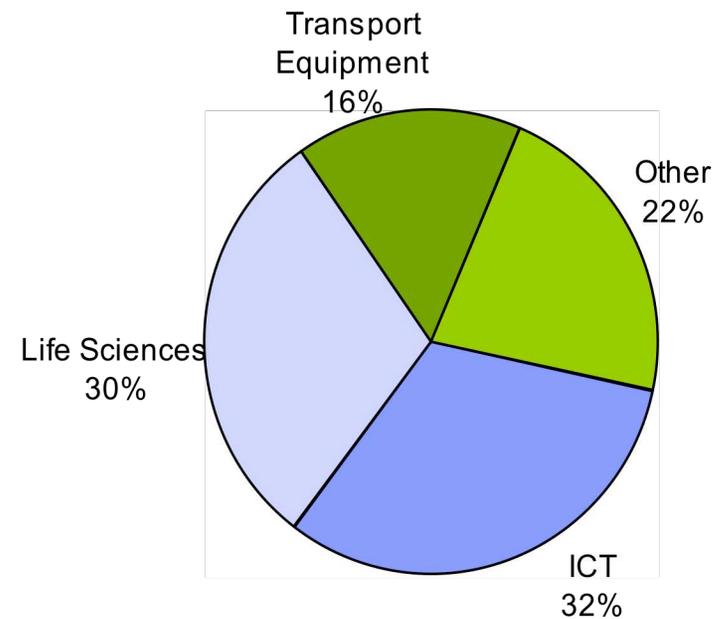
- Records investment project announcements around the world on an ongoing basis
- Monitors corporate investments at the *project level*, records announcements of new (greenfield) and expansion projects by companies globally
- Captures details on the investor, origin, location of investment, subsector and cluster, type of investment, jobs created, capital invested, and other key factors
- Used to identify where recent investment is going, provides key input for identifying location options
- Provides detailed analysis of recent investment trends by sub-sector, and activity, identifying location's market share in attracting cross border investment, monitoring target countries, and other key information
- Supports corporate investor decision-making and provides insight to the development community

## US attracts more projects in Life Sciences and less in ICT relative to worldwide patterns

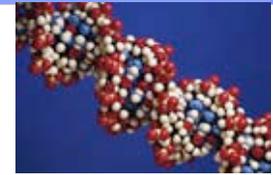
### Project Investments worldwide



### Project Investments USA



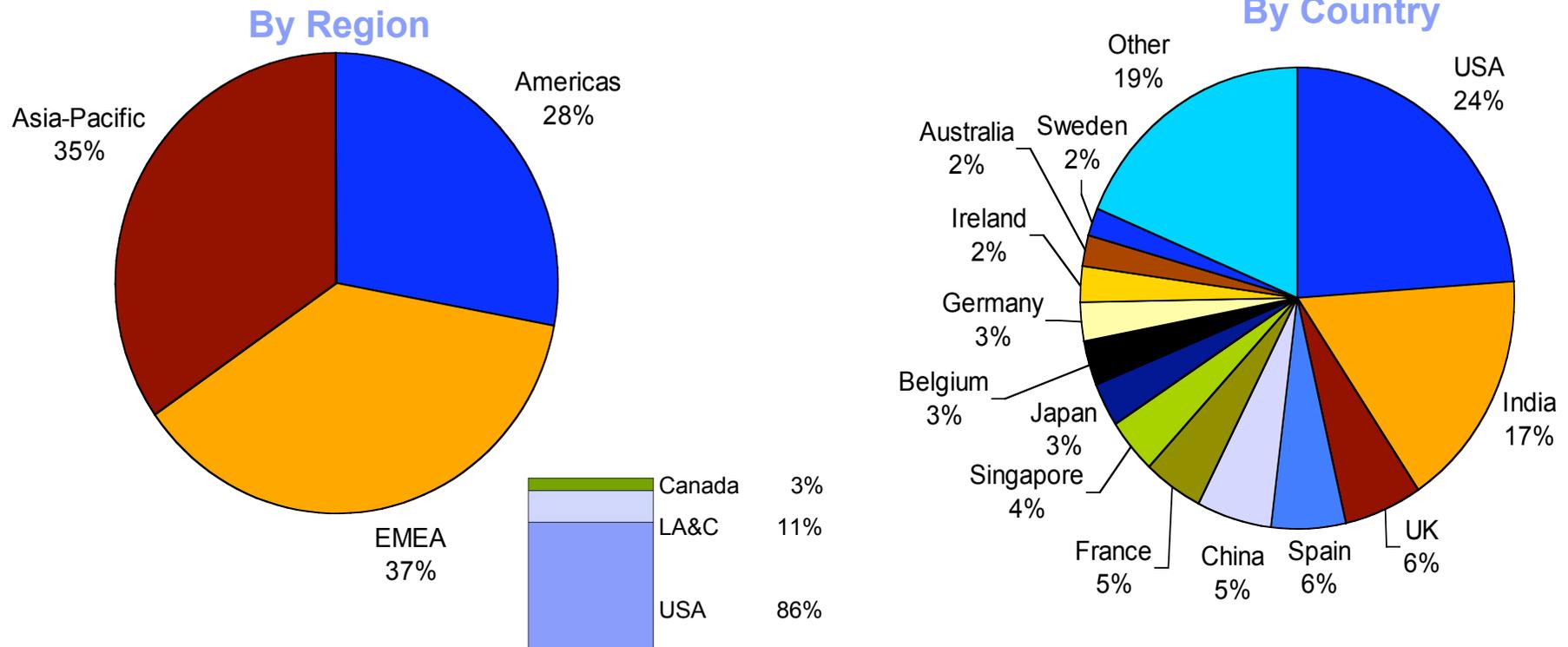
Source: IBM-PLI, Global Investment Locations Database (GILD)



## Life Sciences:

- Most Life Sciences R&D investment going to Europe and AP
- USA is still top destination country
- India has quickly developed as a Life Sciences R&D location

### Investment Location of 240 Life Sciences Projects



Source: IBM-PLI, Global Investment Locations Database (GILD)



## Life Sciences R&D: Conclusions

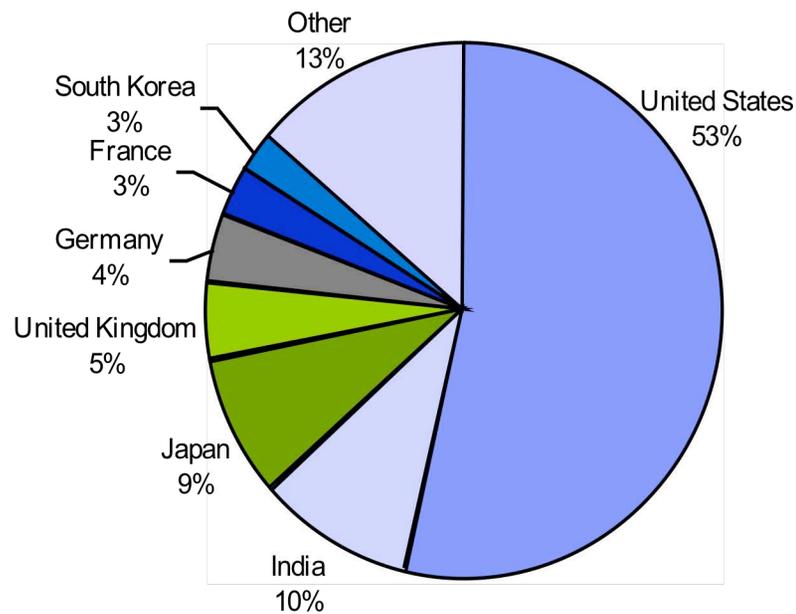
- R&D investment in Life Sciences is at most stable, whereas overall global investment activity is increasing
- Most investment is into Europe and Asia-Pacific
- North America is attracting less R&D investment and the trend is downward
- Emerging markets are not yet highly attractive options for Life Sciences R&D
- Access to skills and research clusters is important, as is living environment for high quality research staff
- Cost of doing business and taxation are of relative minor importance for R&D
- Stable environment and IP protection are concerns
- Many research projects are in the form of partnerships, not in new operations



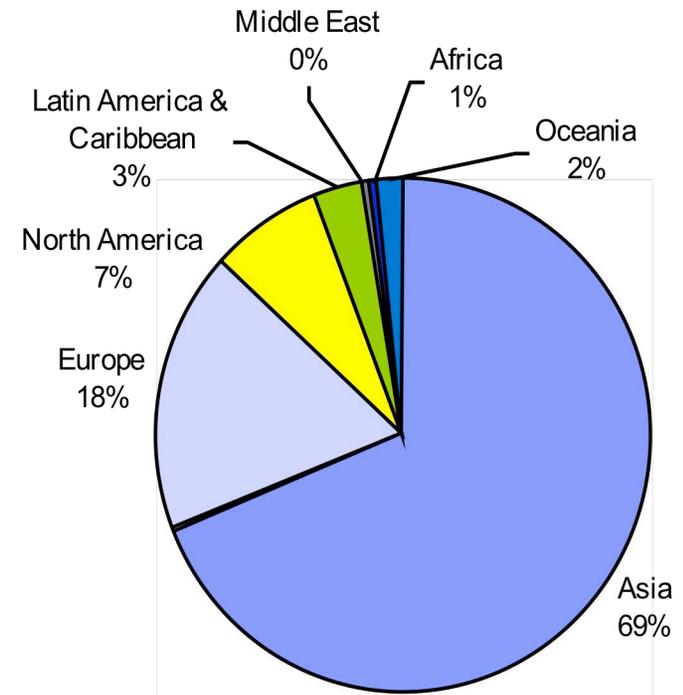
## Information/Communications Technology

- Asia is attracting most ICT R&D investment projects
- ICT R&D investment strongly originates from USA

Origin of Investment



Destination of Investment

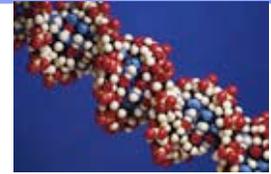


Source: IBM-PLI, Global Investment Locations Database (GILD)



## ICT R&D: Current location drivers

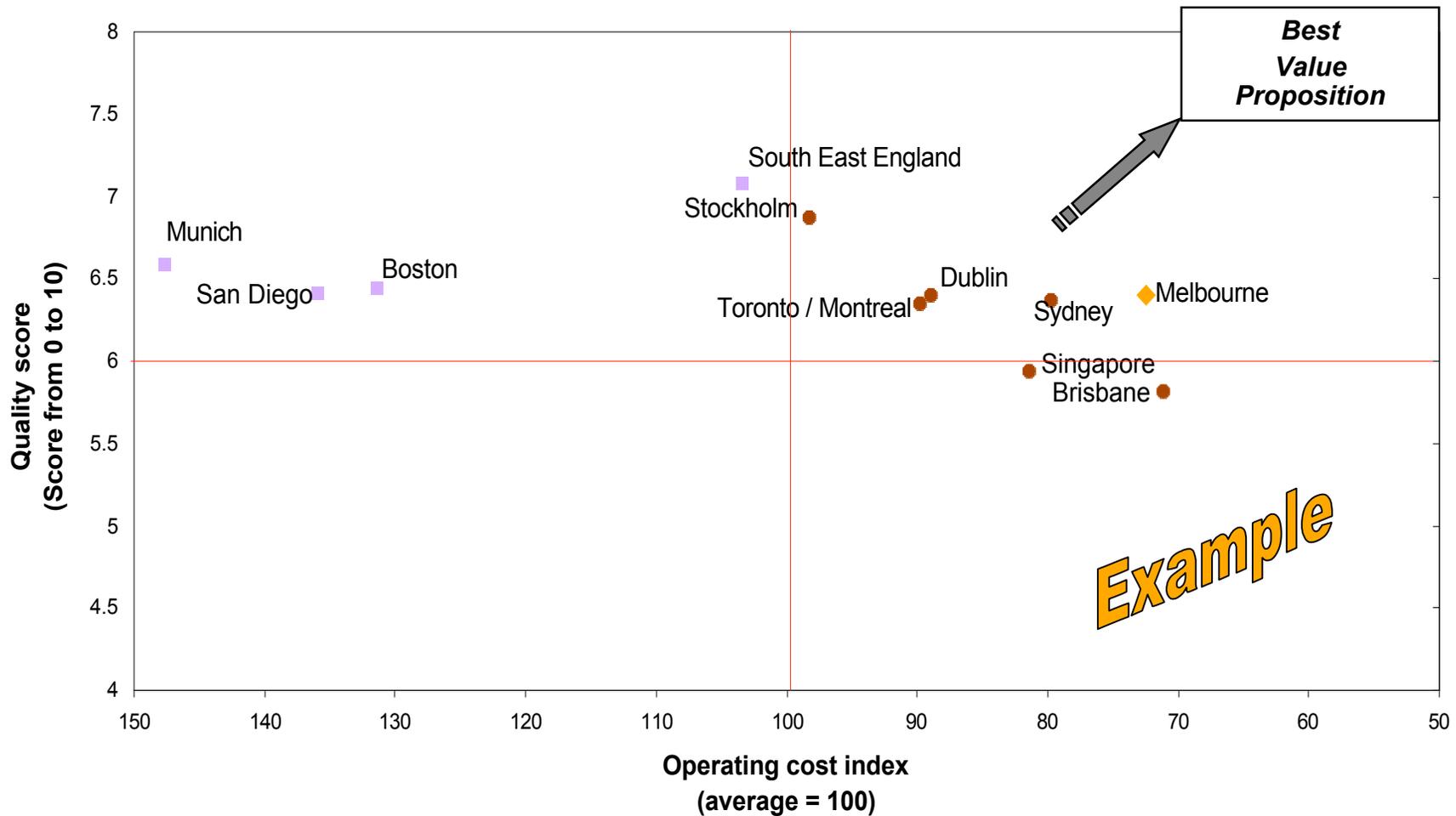
- Mobile global companies seeking sectors and geographic areas for investment
- Competition is driving multinationals to adopt global resourcing strategies
- More and more countries/regions are improving their general business conditions to an acceptable level
- IT related education is gaining strength in many developing regions including India, Russia, and Southeast Asia
- Globalizing companies are identifying pools of Research and IT talent in locations that they previously did not consider
- Universities and related knowledge clusters are key selection factors for both intellectual capital and lifestyle considerations



## GILD Trends: Implications for location marketing

- Promotion of knowledge base and cluster strengths becomes more crucial
  - ✓ Develop marketing strategies based on local strengths (supply driven): universities, etc.
  - ✓ Cluster development becomes key for attracting Life Sciences and ICT R&D investment
  - ✓ Matchmaking role of EDOs will be requested by investors seeking partners
  - ✓ Business retention / after care fits into this supply driven strategy
- New markets for Investment attraction are emerging
  - ✓ Watch emerging markets as source for foreign investment (India, China, etc), not just for Life Sciences and ICT, but also for other industries
  - ✓ Monitor overseas marketing intensity and resources; be responsive to market changes
- Competition for Foreign Direct Investment (FDI) in Life Sciences and ICT is increasing and becoming more and more global
  - ✓ Ensure understanding of competitive propositions; focus on strongest options
  - ✓ Develop value proposition-based marketing strategy
  - ✓ Competitive positioning should be based on investor's cost and quality criteria

## IBM Global Competitiveness Benchmarking: Cost/Quality Matrix -- Biomedical R&D



# Bio & pharma therapies

## Project requirements

**Qualitative location factors** considered and their relative weights. Cost factors are assessed separately.

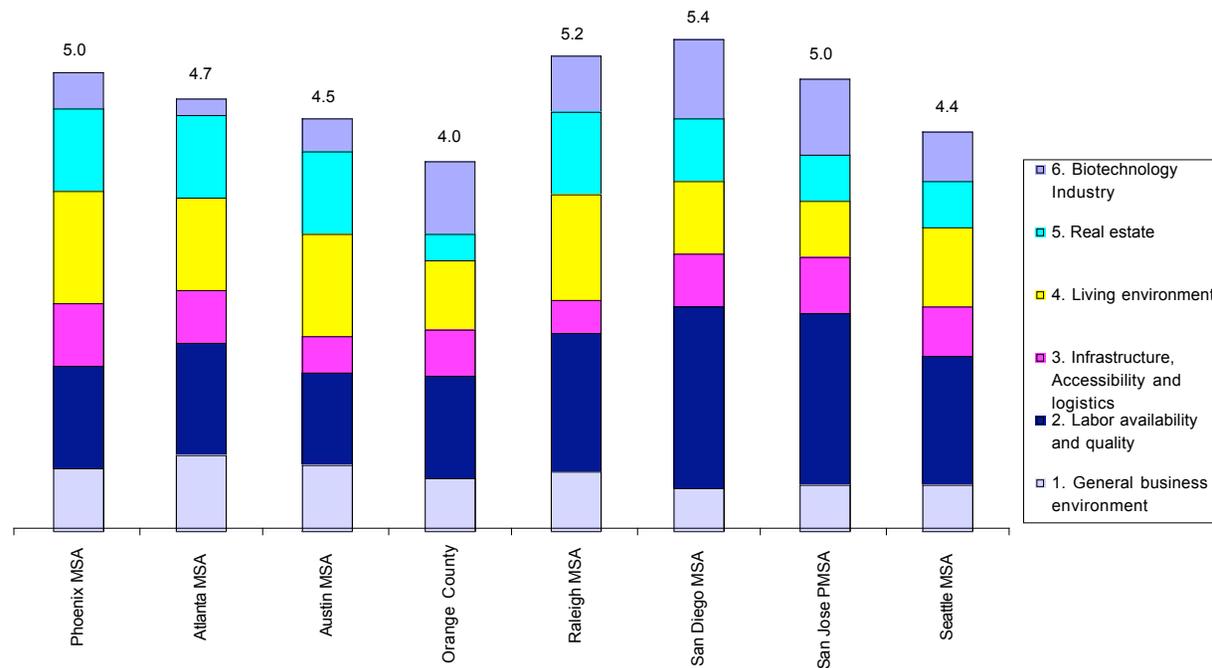
C. 2 Bio & Pharma therapies (R&D)	
Location category	weight
1. General business environment	10
2. Labor availability and quality	35
3. Infrastructure, Accessibility and logistics	10
4. Living environment	15
5. Real estate	10
6. Biotechnology Industry	20
	100

Location factors	weight	overall weight
<b>1. General business environment</b>		
1.1. Economic stability	15	2%
1.2. Taxation and Financial support	30	3%
1.3. Presence of Business support services	35	4%
1.4. Presence of multinational companies	15	2%
1.5. Permits	0	0%
1.6. Risk of natural disaster	5	1%
	<b>100</b>	<b>10%</b>
<b>2. Labor availability and quality</b>		
2.1. Overall size of labor market	10	4%
2.2. Overall tightness in labor market (unemployment)	10	4%
2.3. Size of student population	25	9%
2.4. Availability of qualified staff	40	14%
2.5. Expected strength of competition for similar skills	15	5%
2.6. Industrial relations/Attitude of unions	0	0%
	<b>100</b>	<b>35%</b>
<b>3. Infrastructure, Accessibility and logistics</b>		
3.1. Accessibility to/from domestic airports	25	3%
3.2. Accessibility to/from major international airports	25	3%
3.3. Highway network and congestion	40	4%
3.4. Mass Transit availability	0	0%
3.5. Proximity to market (clients, subcontractors)	0	0%
3.6. Proximity to a sea port	0	0%
3.7. Quality of telecom	10	1%
	<b>100</b>	<b>10%</b>
<b>4. Living environment</b>		
4.1. Cost of living	25	4%
4.2. Safety	20	3%
4.3. Availability and cost of housing	25	4%
4.4. Cultural attractiveness	15	2%
4.5. Quality of schools	15	2%
	<b>100</b>	<b>15%</b>
<b>5. Real estate</b>		
5.1. Availability of suitable sites	100	10%
	<b>100</b>	<b>10%</b>
<b>6. Biotechnology Industry</b>		
6.1. Presence of bio-tech Industries	50	10%
6.2. Presence of University/Research	50	10%
	<b>100</b>	<b>20%</b>
		<b>100%</b>

# Bio & pharma therapies

## Qualitative analysis

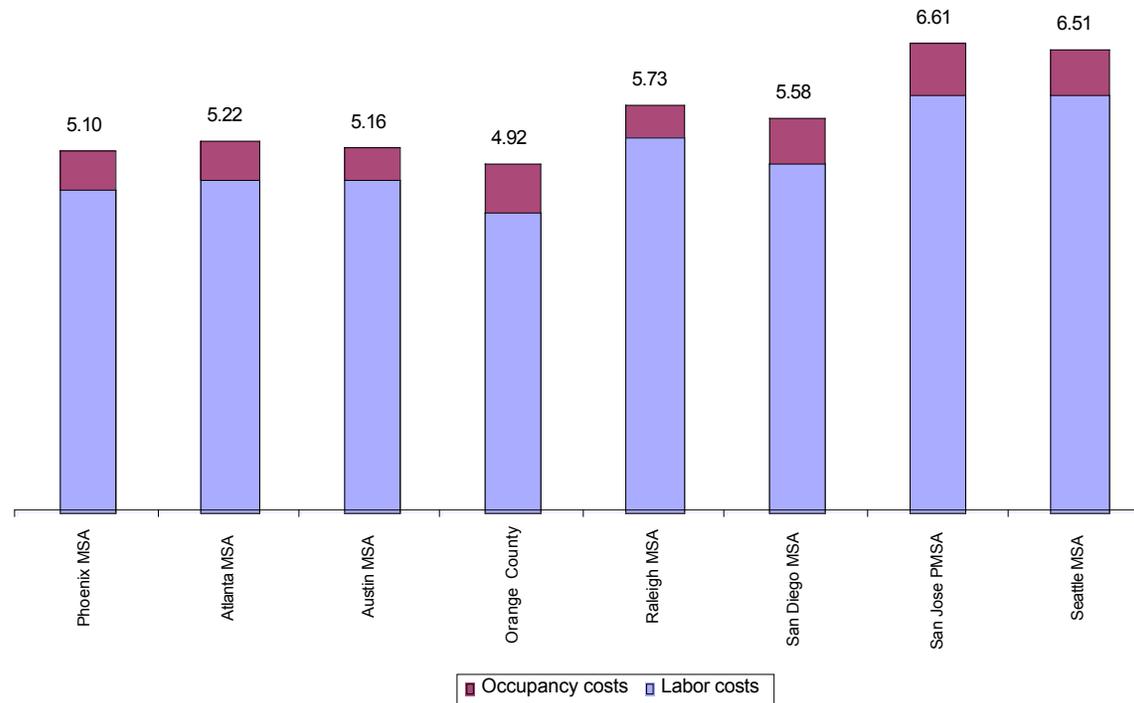
**C2. Bio & pharma therapies (R&D)**  
Overall qualitative scores

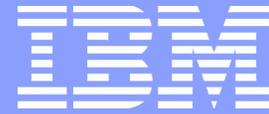


# Bio & pharma therapies

## Economic analysis

**C2. Bio & pharma therapies (R&D)**  
**Total annual operating costs (\$ millions)**





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# Triangle Innovation Project Summary Findings

## Project Background and Status

- Project background:

Partner with RTF to perform a strategic review of how it can achieve its goal:  
*By the year 2020, the Foundation will lead the Research Triangle Park to become the world's leading regional center of innovation, technology commercialization and quality job creation*

- IBM team background:

The IBM Business Consulting team consists of experts in global location strategy and benchmarking, strategy, and economic development

- Project methodology:

- Interviews: 40, both in the US and abroad (substantially complete)
- Best practice research (largely complete)
- Gap analysis (well underway)
- Strategic and business model analysis (underway)

## Overall Project Goal

- Research global leaders
  - Interviews
  - Best practices
- Determine the Triangle's position
  - Metrics
  - Scorecard
- Identify the gap between the Triangle's current and desired position
  - Trends
  - Actions to close the gap

## Competitive Position Overview

- RTP is very **strong**, particularly in Pharmaceuticals, biotechnology, IT
- Dramatically **increasing competition, in IT, biotech, pharmaceuticals**:
  - Many more parks, in the **US** and abroad (17 times more in North America than 35 years ago), and many more large-scale competitors (some country-sponsored)
  - Over half of the world's research parks are **outside of North America** (400 out of 700)
  - **Asia** rising as a new league of competitors in IT and biotech (80 parks in China alone)
  - **Europe** increasingly competitive in biotechnology (2 EU countries out-innovate US)
- More need to **retain** startups and small companies
  - More competition for large companies
  - Startups / small companies driving much of the pharmaceutical industry's advances
  - Increasing competition for small companies too: other parks are wooing startups and small companies, a traditional area of weakness for RTP
- The “**success curse**” means that the Park's success has created conditions that will put many of the Triangle's quality of life assets under pressure

*Upshot: What has worked in the past will not continue to work for the next 50 years. However, the Park is in a great position to take action now to ensure continued success*

## The Success Curse: Quality of Life Very Difficult to Sustain

- Many “best places” rankings share something in common: how rare it is to stay in the top 10 over a decade or more
  - People’s lifestyles and desired characteristics change, the area does not
  - An area’s very success – and the resulting growth – makes it difficult to sustain high scores even on its core characteristics
- Companies that have great success in one (technology) generation rarely repeat that in the next generation: continue doing what has been successful
  - IBM: mainframes vs minicomputers (DEC out-competes)
  - DEC: minicomputers vs PCs (clones out-compete)
  - Microsoft: Desktop OS vs handheld OS (first Palm, now Nokia & Symbian smart phones)

*Upshot: The success curse puts strong downward pressure on area attractiveness*

## Pillars of Continued Success

### Attractiveness to Companies

- Workforce
- Business climate (regulation, taxes incentives, predictability, support services)
- Physical site (services, size)
- Idea environment (universities, research, innovation)
- Economic dynamism (growth, strength)
- Financial climate (capital, financing)

### Attractiveness to Individuals

- Quality of life (cultural, recreational, convenience)
- Economic dynamism (job growth, income growth, strength, stability)
- Climate / Geography
- Cost of living
- Educational quality
- Social interaction (quality, availability)

### Reputation / Brand

- Desirability of a park address
- Attractiveness of park association
- Name recognition
- Marketing prowess
- Credibility of area as research and technology leader

### Intellectual Interaction

- University – company cross-fertilization
- Company – company association
- Entrepreneur – institution interaction
- Individual – individual connection

## Pillars of Continued Success (cont.)

### Attractiveness to Companies

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### Leadership

- Connected
- Catalyst
- Vigilant
- Improvement-oriented
- Proactive
- Focused on the right things

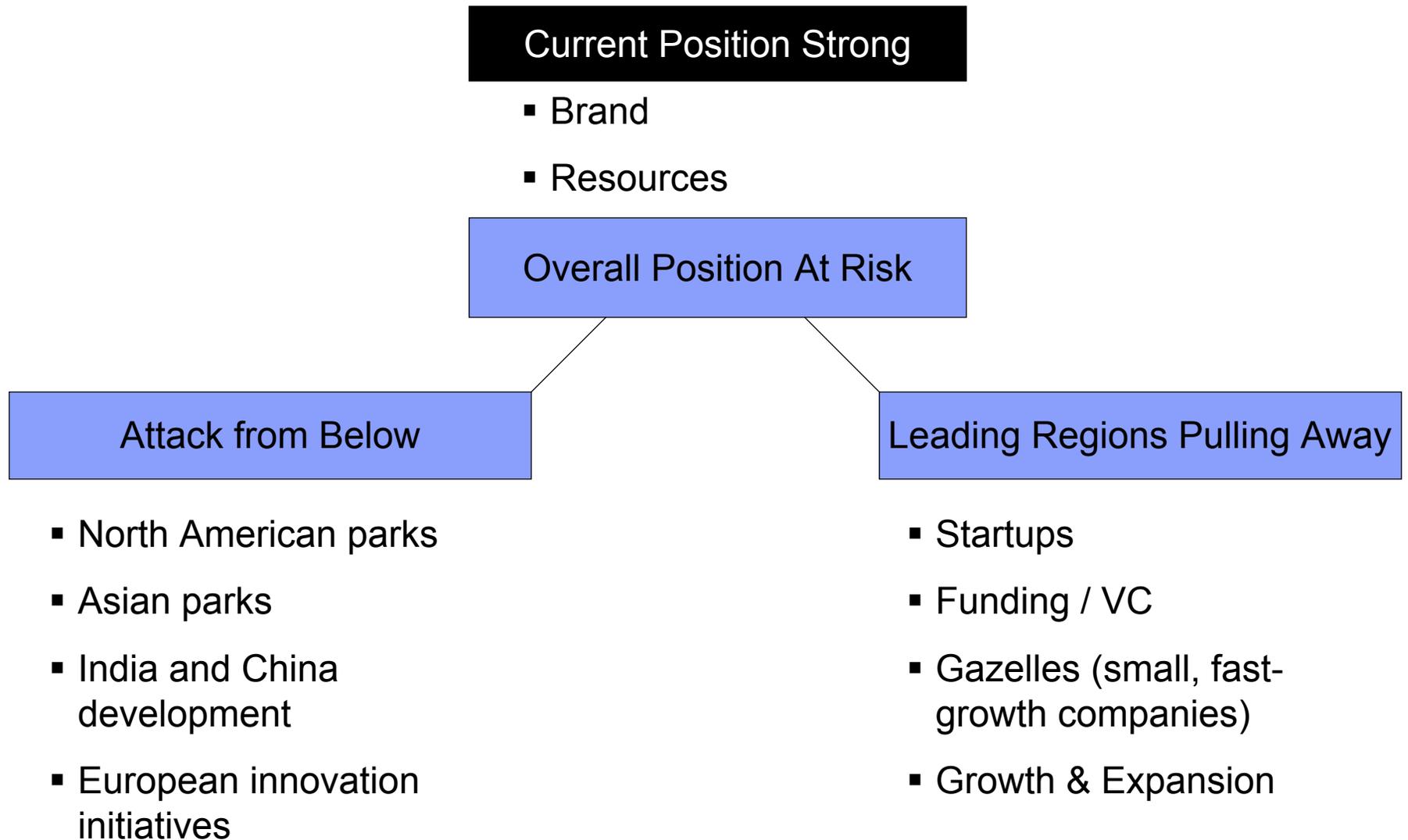
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## Competitive Position Strong But Eroding



## Threats from Below

- The Triangle's current position is very strong: it is in the top 5-6 for high-technology regions (in the US and probably worldwide) on most key measures
- The Triangle's lead over lower-ranked regions is under threat:
  - **North American** research park competition: 12-fold increase in the last 35 years, with medical bioscience the leading focus in North America
  - World competition: Over half of the world's research parks are **outside of North America** (400 out of 700)
  - **Asia** rising as a new league of competitors in IT and biotech
    - 50 national parks in China alone (and over 100 local ones)
    - Korea's New Songdo City, 40m square feet, may be the largest private development project in world history
    - VCs insisting on China or India strategy: "There isn't a board meeting that goes by that we don't ask, 'Why aren't you being more aggressive (with software development) in India and China?'"
  - **Europe** increasingly competitive, and increasingly focused on innovation:
    - Gate2Growth initiative across the EU
    - Innovation Relay Centers: 1,000 employees, 12,000+ transactions

## Challenges from Above

- Regions ahead of the Triangle are solidifying their lead :
  - The Triangle is very competitive for large companies, but trails for startups and smaller companies:
    - Turning research into **startups**: MIT had nearly three times as many startups (90) as the three Triangle universities combined (33) in 2002, though the three had more total research funding (\$1B to \$900M)
    - Attracting **VC funding**: Triangle VC activity is one-half the percentage of gross product that Seattle's is, one-quarter that of Silicon Valley, and trails Boston and San Diego. (VC-funded companies create jobs at twice the rate of others)
    - Employment in small, growing companies ("**gazelles**"): The Triangle ranked 48th of 50 regions studied. San Francisco was number one, with San Diego (#6) and Boston significantly higher than the Triangle
    - **Growing small companies** into large ones: Silicon Valley, Seattle, and Boston all ranked in the top four for new publicly traded companies. The Triangle ranked 22nd
  - The Triangle also trails in regional **creativity**, ranking #6 while all three of the Triangle's top research-focused competitors – Boston, San Diego, and San Francisco/Silicon Valley – rank higher

## Very Difficult to Overtake Existing Leaders

- In key Triangle clusters, other regions have leadership :
  - IT & systems                      Silicon Valley
  - Biotechnology                      Silicon Valley, Boston, San Diego
  
- The same is true for key entrepreneurship factors :
  - Venture capital                      Silicon Valley
  - University spin-offs                      Silicon Valley, Boston
  
- Cluster leaders benefit from the reinforcing nature of regional cluster success, allowing them to solidify their lead :
  - Best performance attracts best talent
  - Best talent attracts best funding
  - Combination yields most innovative firms
  - Innovative firms create best performance

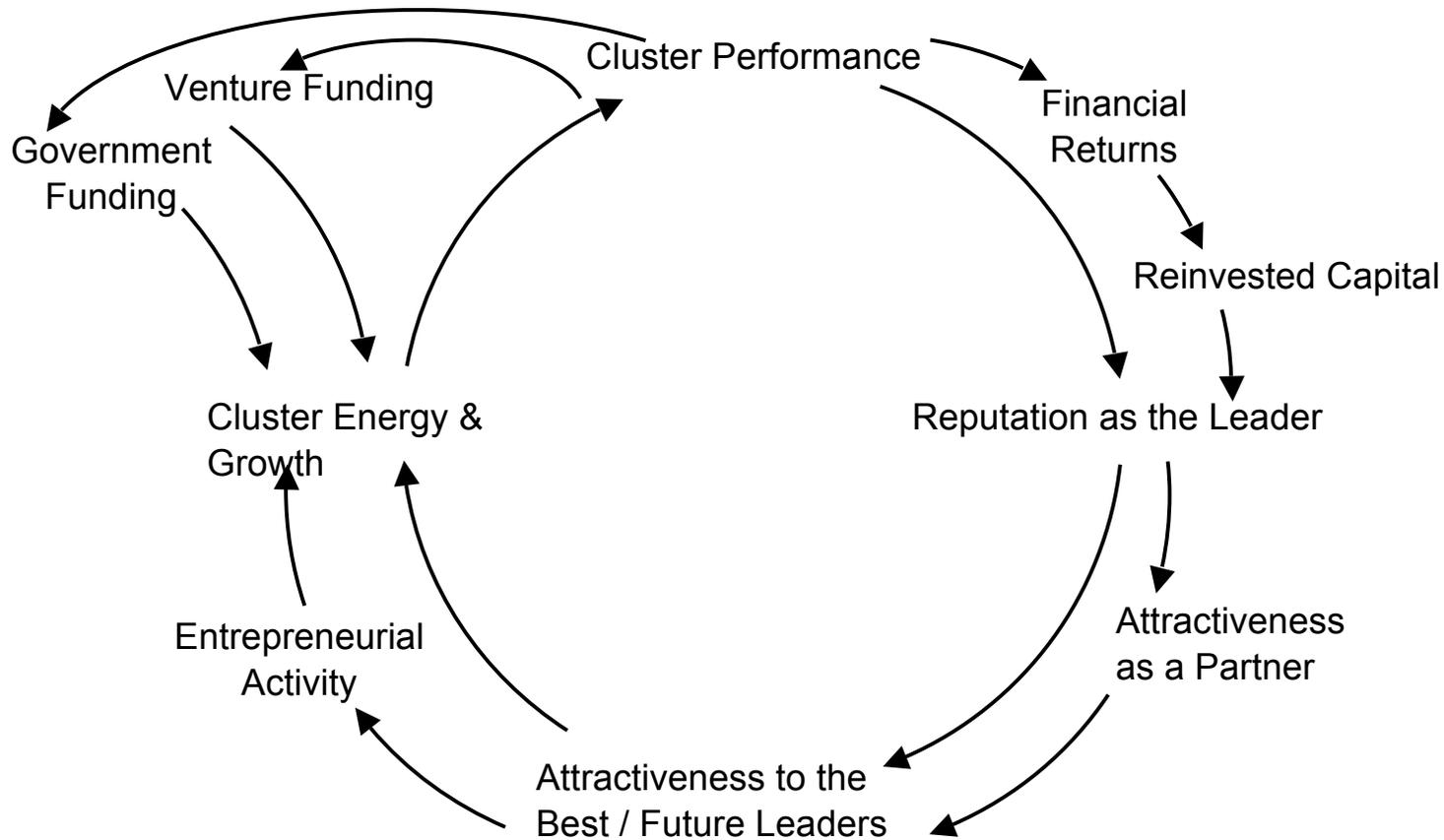
## Empirical Illustration: The Higher the Ranking, the Harder to Move Up Further

- In order for RTF to accomplish its goal, the Triangle will have to move up from a ranking of 3-5 to a ranking of number 1 (in key areas, if not in all)
  - However, the higher up in the rankings, the harder it is to move up. For example, in venture capital funding, #1 has remained the same for all years since 1995, #2 remained the same for the last 10

Ranking	Turnover since 1995
1	0%
2	9%
3	36%
4-5	66%

Source: PWC MoneyTree (sm) Rankings

## Illustration: The Reinforcing Nature of Success Benefits Top Regions

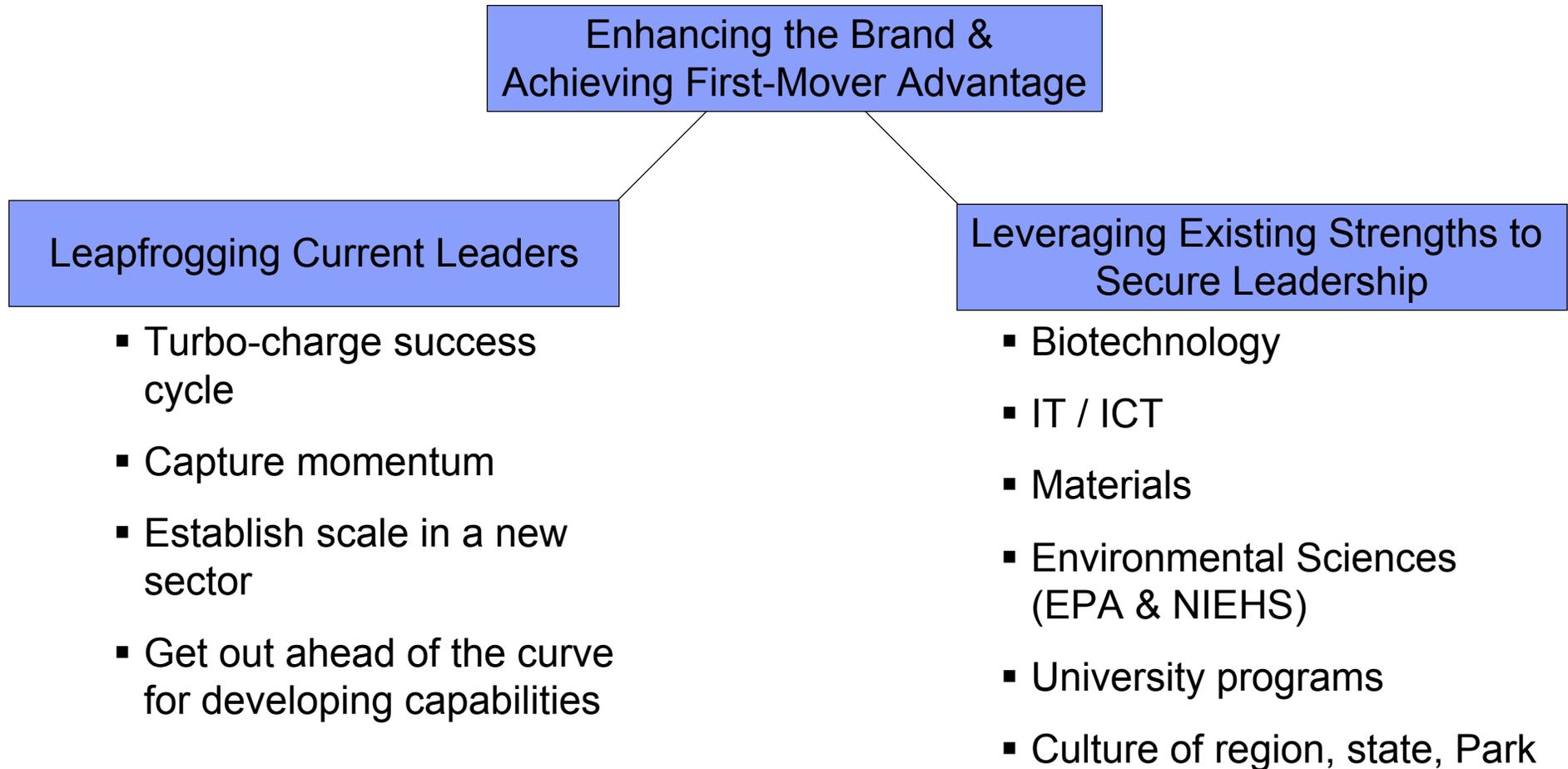


**The ultimate result of such a system is that dominant players become increasingly entrenched in the niches in which they are dominant**

## Incremental Improvement Will Not Be Enough -- Out-of-the-Box Actions Required

- The Triangle will have to cross a wide gap to become the number one region for innovation, technology, and high quality job creation
- **Incremental improvement will not be enough** to overcome the success cycle powering the regions ahead of it, though it is within striking distance if substantial action is taken
- Therefore, the Foundation and the **Triangle must look to out-of-the-box thinking** for potential actions that will help it leapfrog competitors (while continuing to incrementally improve its current strengths and cater to its current businesses)
- Benefits from leapfrogging:
  - Dramatically upgrading the reinforcing success cycle
  - Increasing attraction of startups and gazelles
  - Dramatically raising the amount of venture capital attention the region receives

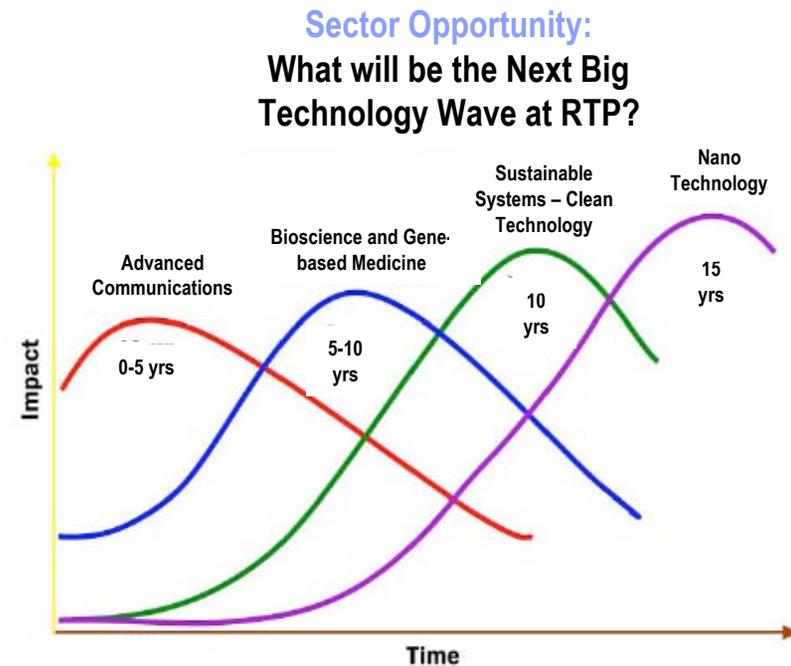
## The Power of Out-of-the-Box Actions



## The Power of Out-of-the-Box Actions to Establish Leadership

Four possible approaches for out-of-the-box actions to leapfrog competitors and accomplish first mover advantage.

1. **Leverage existing strengths to secure leadership in a next-generation Sector**
  - Nanomaterials and nanorobotics
  - Genomics/computational medicine
  - Sustainable systems - clean technology
  - Biodefense
2. **Establish leadership with a cross cutting Technique to become an “open innovation” hotbed and horizontal cluster**
3. **Create a “plug and play” internationalization Platform with other parks and regions**
4. **Strengthen regional computing collaboration to bring an added Capability to the region**



Can we leverage our existing strengths sufficiently to catch and exploit it?

## Research Triangle Park: What we learned

- The old economic development model is losing relevance
- We can no longer be just an economic development implementer
- We need to meet the market in a way that builds on our strengths
- It is time to redefine the RTP Business Model



## Two Paradigms of Economic Development Strategy

### Traditional

- Examine ED Strategy from starting point
- Focus is on means
- Incremental progress is measured

### Alternate

- Examine ED Strategy from end goal
- Focus is on end goal
- The distance between the current state and the end goal is measured

## How do the Paradigms Compare?

### Traditional:

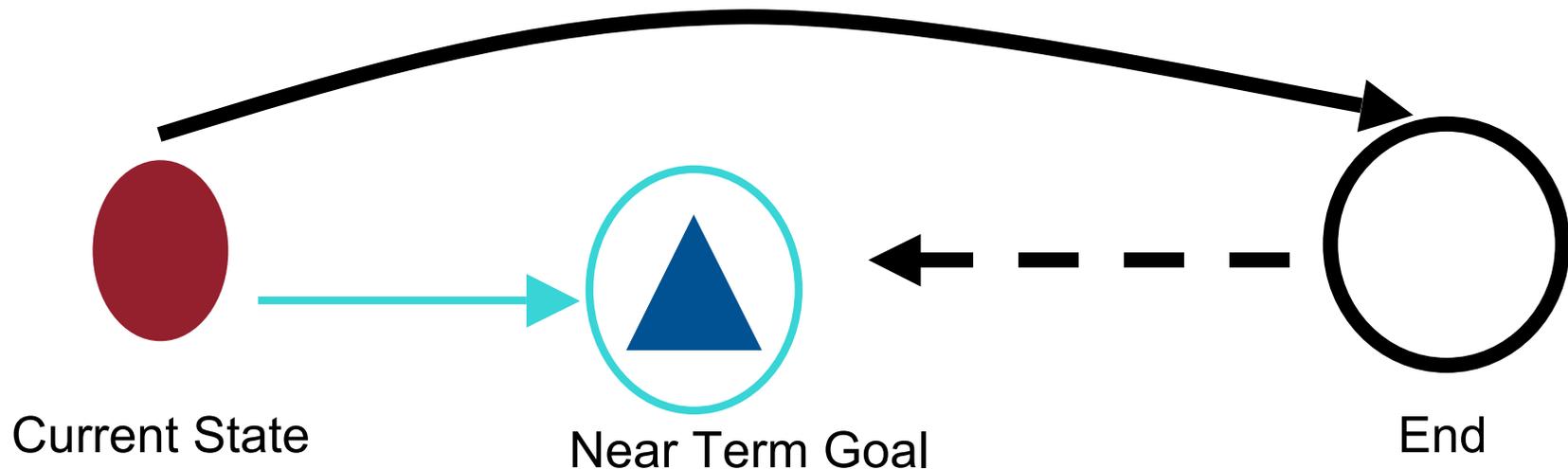
**“Creeping incrementalism”**

Means determine  
the end state

### Alternate:

**“Reverse Engineering”**

Means are determined by what is needed  
to obtain  
the end goal



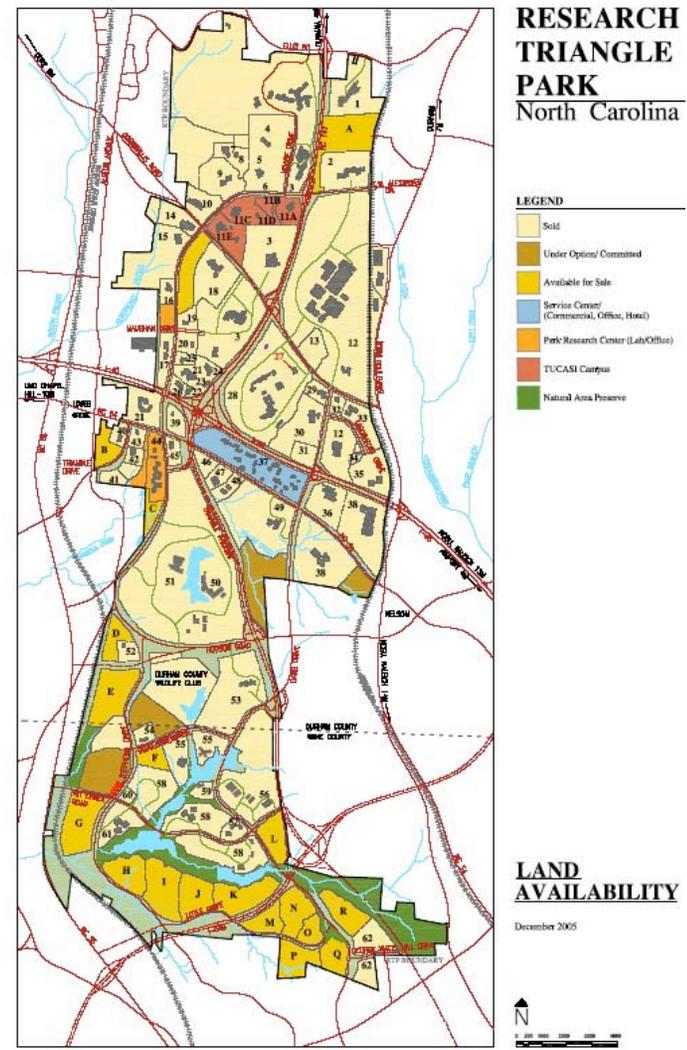
## New Business Model: Foundation Roles & Core Functions

- RTP Development Implementer
- Knowledge Asset Catalyst
- Leadership Convener & Facilitator



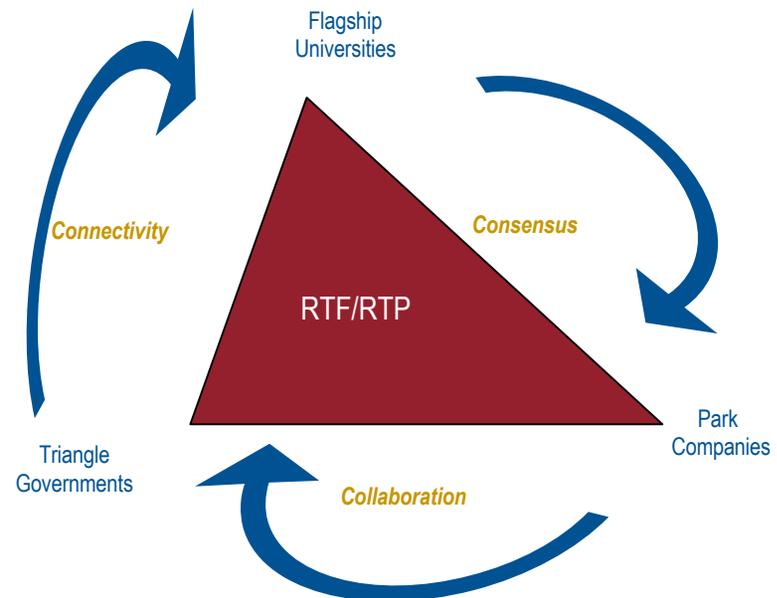
## RTP: Development Implementer

- Develop RTP properties
- Re-develop RTP properties
- Market and sell RTP properties
- Support innovation and technology commercialization at all levels
- Revise RTP master plan to meet long-term development needs and requirements



## RTP: Knowledge Asset Catalyst

- Serve as thought leader to push out-of-the-box thinking
- Engage knowledge asset leaders and allies to support leapfrogging needed to launch next generation technology sector
- Develop a strategic RFP process to support ongoing research
- Build internal research and information management capacity



## RTP: Leadership Convener & Facilitator

- Create a greater sense of community and engagement at RTP
- Launch RTP workshop and seminar series
- Support RTP clusters development
- Develop a technology platform and IT capacity to connect RTP firms and employees
- Address Owners & Tenants needs and amenity demands
- Build employee networks and communities of interest
- Provide ongoing economic development training and education
- Increase public policy advocacy and education



RTP -- New Headquarters  
(Conceptual Plan)

## What can you learn?

- Exceptions to the rule over the short term
- Old economic model is not sustainable over the long term
- Future for economic development in America is tied to our community's relationship and juxtaposition with world class knowledge assets

### 4 Rules to the Game regarding knowledge assets:

- If you have them, exploit them
- If you have them, improve them quickly
- If you don't have them, create them -- niche strategy
- If you can't do that, connect to knowledge assets

## IBM: What we have learned through the model/ Implications

- The very top research areas (15 worldwide) have unique histories and cultures and different challenges and strategies from everywhere else – trying to copy them is unrealistic; build on your own unique strengths
- Raising a region's performance is partly about best practices and largely about benefiting from an understanding of where you are positioned relative to your *innovation peers* – where are you relative to those ahead of you and those nipping at your heels?
- Lower ranked regions can benefit from the downstream effects of a top region's success, taking innovation output and building on it through:
  - Linkages to local development strengths
  - Improvement/refinement
  - Entrepreneurship
  - Tailoring
  - Standardizing
  - Commoditizing

## **IBM: Model implications for other regions**

### **Downstreaming and super regional collaboration, broader options for investors:**

- Top-tier region (the top 10 nationally, top 15 worldwide): Sharpen leading-edge assets, protect flanks, leapfrog to new technologies, network globally
- Second tier areas (with a research university): Define niche based on own strengths, leverage downstream opportunities from top-tier region strengths
- Third tier areas (with non-research universities/colleges): Build / enhance services and supporting capabilities for local and regional market
- Fourth tier (smaller communities with community colleges, rural areas): Focus on location and space-specific advantages that can support higher-tier areas by providing services and support at lower cost
- For all -- working together to capture the downstream benefits of top-tier regions to increase overall opportunities for investment, wider range of solutions through online collaboration and networking, i.e., high quality innovation coupled with lower cost delivery
- Leads to economic and social vitality and further success across region

## IBM View: Economic development is changing as the world globalizes and job growth opportunities shift

### Traditional Economic Development

- Focuses on growth of jobs in industrial enterprises
  - ❖ Manufacturing
  - ❖ Distribution
  - ❖ Transportation
- Sensitive to transportation, site selection, labor
- Facing tough competition from low labor cost regions
- Government assists with zoning, site selection, hard infrastructure and tax concessions

### Collaborative Economic Development

- Focuses on intellectual capital driven industries
  - ❖ Research
  - ❖ Technology
  - ❖ Services
- Sensitive to access to ideas, collaboration, venture capital
- Less susceptible to globalization
- Government assists with value networks to promote collaboration and access to critical services

**Developed and developing regions must define and implement new strategies to be successful. Innovation will play a vital role in creating new economy jobs even where it has not been vital in the past.**

## IBM View: Model implications for other regions

**Downstreaming and super regional collaboration, broader options for investors:**

Market Attributes	Traditional Strategies	Globalization Strategies
Top-tier region (the top 10 nationally top 15 worldwide):	Recruit large companies; develop spin-offs	Sharpen leading-edge assets, leapfrog to new technologies, serve as global network
Second tier areas (urban area with a research university)	Recruit large and medium size companies, encourage entrepreneurial development	Define niche based on strengths, leverage downstream opportunities from top tier region strengths
Third tier areas (with non research universities/colleges)	Focus on cost advantages, retain existing companies	Build / enhance services and supporting capabilities for local and regional market
Fourth tier (smaller communities proximate to First tier areas)	Retain manufacturing and service companies	Provide lower cost, less congested alternatives for tech development, manufacturing and support services where proximity is important
Fourth tier (smaller communities with community colleges, rural areas)	Retain manufacturing and small regional service companies	Focus on location and space-specific advantages to support innovation by providing services and support at lower cost

## Bottom line

*Working together increases overall **opportunities for investment**, offers wider range of solutions through online collaboration and networking, (**high quality innovation coupled with lower cost delivery**), and leads to **economic and social vitality** and further **success across region***

# Thank you!

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