



Bill Dean
Wake Forest
University Health
Sciences

Piedmont Triad
Research Park

PiEDMONT TRIAD RESEARCH PARK

Winston-Salem, North Carolina

Research Parks Critical Role in the Economy

March 15, 2007

Universal Understanding:

The role **science and **technology** plays in restoring and building economic prosperity in the 21st Century is without question . . .**

Communities are developing Incubators and Research Parks ...

Technology and business incubation catalyzes the process of starting and growing companies. Their primary role is to provide counseling, networking, and consulting services to reduce the risk of failure. There are more than 800 incubators in the US.

Research Parks are the next generation of creating micro-economies. They are a source of new, technology driven growth for a surrounding region taking advantage of the intellectual capital from academia, federal labs, and industry. There are 195 research parks in 40 US states and growing.

Why a Research Park?

- ♣ Creates a critical mass of research, people, and clusters of technology that brings value to companies...Regionally and Internationally.
- ♣ Provides a brand image of association with technology...expanding Economic Development opportunities.
- ♣ Has a university presence/association that brings value to technology development from faculty, students and facilities...Technology Transfer and Commercialization.
- ♣ Provides amenities and services through community support...and Networks.
- ♣ Builds a positive business climate that recognizes success...for Entrepreneurial Development.
- ♣ Provides an environment that is conducive to attracting capital, technical labor and experienced management.

Research Parks / Science & Technology Parks are:

Intended to serve as a **seedbed** or **catalyst** for the development of a cluster of innovative and technology oriented business enterprises in a region or state.

- ♣ An **environment** that fosters technology, innovation and commercialization
- ♣ A **place** that creates a “community of knowledge” where scientists from universities and those from industry can collaborate, invent new technology, and market it

BioParks are:

University Research Parks with a focus on Life Science Research and Development.

Research Parks are a phenomenon of the post-war era:

Parks first started in the 1950's, and took off in the 1980's. Unfortunately, there is no textbook manual for standard development since **parks differ** in objectives, size, ownership and research activities.

“One Size Does Not Fit All”

Research Parks Serve Multi-Objective Initiatives ...

Universities: Looking for research opportunities, access to industry and markets for product research...increased funding

Businesses: Seeking technology ideas and innovation, trained labor and new business opportunities...economic expansion.

Entrepreneurs: Looking for a place to begin business that provides the right facilities and environment to help the business survive and prosper.

Property development companies: Looking for a return on investment, image and meeting users' requirements.

Profile of North American Research Parks

Types

- ♣ Big and small
- ♣ Urban, suburban, and rural
- ♣ Mixed used developments
- ♣ Multi-disciplinary focus/single technology focus

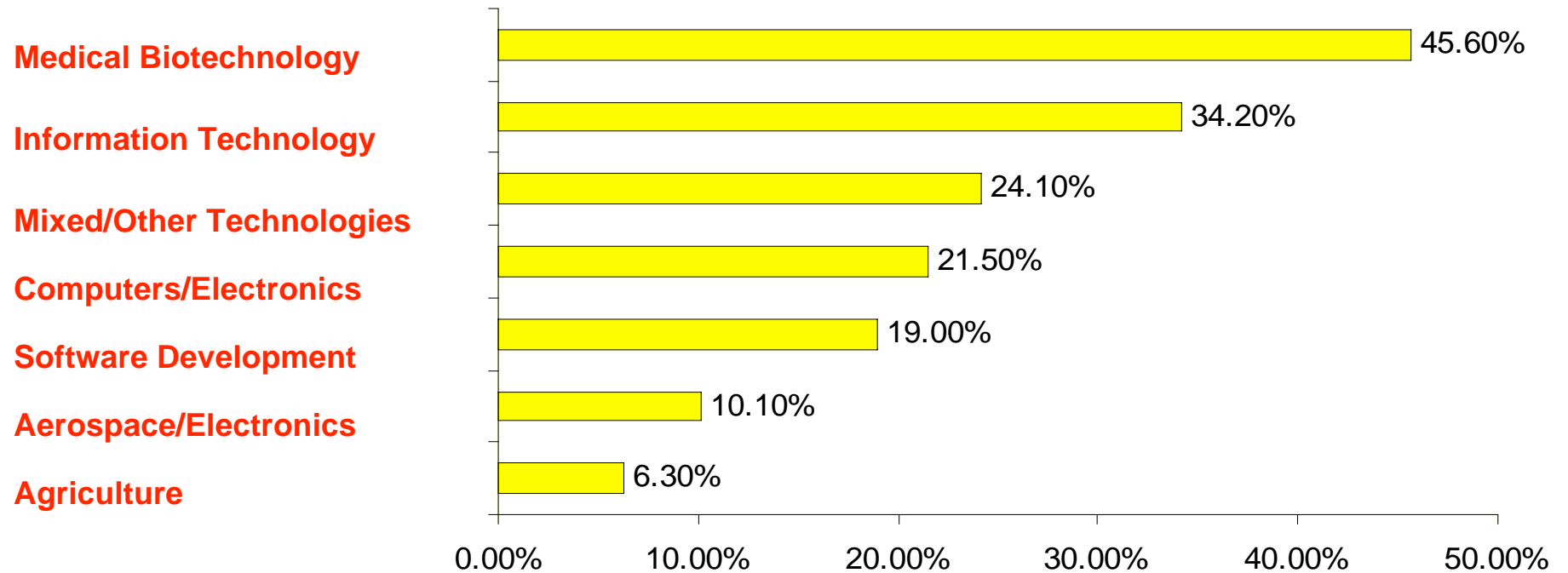
Profile of North American Research Parks

- ♣ 195 Research Parks
- ♣ Majority of parks were established in the 80's and 90's
- ♣ 90% are adjacent to an academic university center
- ♣ 80% are not-for-profit entities
- ♣ 65% have incubators
- ♣ 75% of tenants are private companies
- ♣ 3,600 organizations / companies located in parks
- ♣ 144,000 FTE employed in parks
- ♣ 41,000 acres of land / 532 acres average in parks
- ♣ More than 94 million square feet of space
- ♣ Parks plan to add 32 million square feet of space
- ♣ Total capital investment exceeds \$8 billion / \$186 million in each park

Profile of Research Parks in North America

DOMINANT TECHNOLOGIES

(Some parks reported more than one technology)



Who are the tenants?

- ♣ University, industry and government research facilities
- ♣ Business incubators
- ♣ Companies in all phases of development – start-up to Fortune 100
- ♣ Education and workforce training centers
- ♣ Economic development organizations

Research Parks: Current Trends

- ♣ Bio Parks
- ♣ International partnerships and recruitment
- ♣ Regional partnerships and recruitment
- ♣ Joint use by university and industry of laboratory facilities
- ♣ Focus in innovation and commercialization...translational science

Super Clusters and Smaller Clusters

Super clusters have a number of similarities that have been translated to smaller clusters.

- ♣ Located in close proximity to academic centers or federal labs.
- ♣ "Star Scientists"
- ♣ One firm serves as an anchor to the clusters attracting others.
- ♣ Often situated around large metropolitan areas providing a deep financial base to operate.
- ♣ Strong connection to a local University.

Super Clusters and Small Clusters...cont'd

- ♣ Successful commercialization of research efforts.
- ♣ Bioparks and Incubators with specialized facilities.
- ♣ Clearly defined niche.
- ♣ Strong networking groups.
- ♣ Available and educated workforce.
- ♣ Venture Funding
- ♣ Long-Term focus of business partners.

Research Parks... *Economic Impact*

- 3,258 Companies/Organizations in Parks
 - Range from 3 to 240
 - Average of 51 per Park
- 144,260 Full-Time Employees in Parks
 - Range from 4 to 25,000
 - Average of 2,291 per Park
 - 23,506 Students/Interns are also in Parks
- \$7.76 Billion in Developed Land, Infrastructure, and Buildings in Parks
 - Range from \$1.75 Million to \$2.15 Billion
 - \$158 Million per Park

Note: 76% of Parks have plans for expansion.

Challenges Facing Research Parks

- Lack of Equity Funding for Technology Commercialization
- Lack of Public Funding for Infrastructure
 - Roads, Utilities
- Lack of Equity or Debt Financing for Buildings
 - Wet Laboratories, Clean Room Facilities

Why are some Research Parks more successful than others?

- ♣ University – Federal Lab involvement
- ♣ High-tech talent...Clusters
- ♣ Capital & VC Funding
- ♣ Physical infrastructure
- ♣ Crisis to change
- ♣ Entrepreneurial culture
- ♣ Amenities - Work - Live - Play
- ♣ Leadership...Experience
- ♣ Regional and International Scope
- ♣ Patience

And plain good luck!

Bill Dean, **!de**alliance

Research Parks

Basic Keys to Success ...

Bridging the gap between research and product development will require partnerships and collaborations that provide:

- ♣ **Technology transfer & commercialization** – [lab to market]
- ♣ **Technology education and training** – [cradle to grave]
- ♣ **Technology incubation & acceleration** – [emerging growth companies]
- ♣ **Technology investment** – [access to capital]
- ♣ **Technology Leadership** – [competitive thinking]

A Part of North Carolina's Innovation Community



[New Jobs across North Carolina](#)

PiEDMONT TRIAD RESEARCH PARK

Winston-Salem, North Carolina

Contact Information:

Bill Dean

336-716-8676

Email: bdean@wfubmc.edu

www.ideallianceinc.org

PTRP Stats

230 Acres

35 Tenants

902 Population

554,011 Sq.Ft.

