

# ECONOMIC HISTORY

## High Tech Down South

BY DOUG CAMPBELL

It takes a good hour to tour Research Triangle Park (RTP) by car. Across this lush 7,000 acres, two miles wide and eight miles long, are more than 100 low-slung buildings, home to some of the largest high-tech companies on the globe. IBM, GlaxoSmithKline, and Cisco Systems are just a sample of the firms employing 38,000 well-paid professionals here. Forty-six years old, RTP is arguably the world's premier research park, the envy of so many would-be technology communities and the showpiece of North Carolina's vaunted status in the New Economy.

All of which does not mask the significant challenges facing RTP in the 21st century. Employment here is down from the peak of 45,000 workers just a few years ago. Many buildings are aging and growing obsolete, with several sitting vacant. In a world where U.S. firms can tap lower-cost sources of R&D as far away as India and China, the questions about RTP mount. It is no wonder that when RTP's new president, Rick Weddle, was interviewing for the job about a year ago, a lot of friends discouraged him from taking it: "Why would you want to do that?" well-meaning colleagues asked. "Isn't RTP about finished?"

### Bold Vision

In the summer of 1957, the idea of RTP being "finished" was the furthest thing from William Little's mind. It hadn't even started. Little was a 28-year-old, newly minted chemistry professor at the University of North Carolina at Chapel Hill, a native of the state who was looking forward to finally begin work as a teacher and researcher. Then his department chair asked Little to use the summertime on a novel pursuit: asking companies if they would consider opening shop in a non-existent place between UNC, Duke

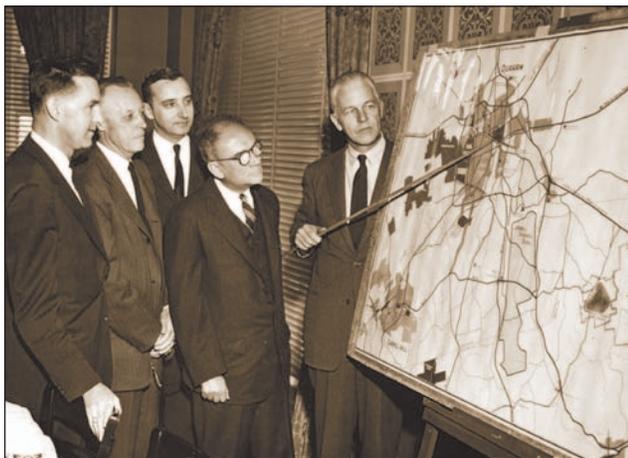
University, and North Carolina State University tentatively called Research Triangle Park.

This struck Little as a superb idea. Even new to his job, he understood a chief problem facing North Carolina's economy was that many of the science and engineering graduates of its universities inevitably left for jobs in large, often Northern cities. "I couldn't do anything with my work in chemistry in North Carolina," Little says today at age 75.

So Little packed his suitcase and went calling on captains of industry in New York. The reactions were mostly positive, he recalls, but there were no immediate takers. It was in the summer of 1958 that Little hit paydirt when a top executive with Chemstrand Corp. was visiting the Chapel Hill campus on a recruiting trip for Ph.Ds. As recounted by Little and by economist Albert Link in Link's *A Generosity of Spirit: The Early History of the Research Triangle Park* Chemstrand soon ditched plans for a facility in Princeton in favor of RTP.

In 1961, Chemstrand opened for business, becoming the first major industrial tenant at RTP. Astroturf was "discovered" in Chemstrand's lab there. The firm moved some decades later, but Little remains a fixture at

**In the mid-1950s, few would have imagined that the North Carolina pinelands would become home to a cluster of high-tech firms, but that was before Research Triangle Park was born**



*Early organizers of Research Triangle Park gather around a map of their grand plans. Among them was Romeo Guest, second from right, who is generally credited with coining the term "Research Triangle."*

RTP as both a member of its board of directors and a past leader of many of its units and organizations. A newly constructed street looping around the southern end of RTP now bears his name.

RTP would never have appeared on the map if not for extraordinary careful planning and fund-raising by some of the state's leading figures of the time.

It began to take shape in 1954. The coining of its name is credited to several sources but mostly to Romeo Guest, a Greensboro contractor who sketched the proposed location on a brown paper bag over drinks at the Richmond County Country Club. Legend has it that Guest noticed how UNC, Duke, and N.C. State formed a sort of sideways triangle. Link's *A Generosity of Spirit* relates a March 1954 meeting with Guest, Wachovia Bank President Robert Hanes, and North Carolina Treasurer Brandon Hodges whose stated purpose was the need for industrial growth but turned into Guest's pitch for Research Triangle Park. A year later, Gov. Luther Hodges (no relation to Brandon) established the Research Triangle Development Council, which quickly became the Research Triangle Committee.

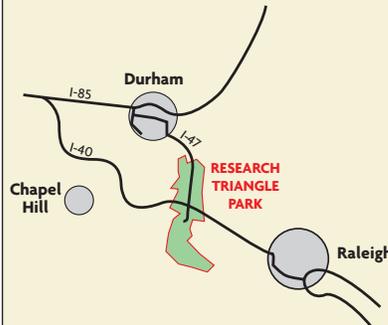
In a description that holds up to this day, Hodges once described the committee's vision for RTP as encompassing three things: the actual tract of land, the three universities themselves, and "... an idea that has produced a reality — the idea that the brains and talents of the three institutions, and their life of research in many fields, could provide the background and stimulation of research for the benefit of the state and nation."

### Laying the Foundation

Between 1957 and 1959, the park's journey from dream to reality was driven by two key businessmen. The first was Karl Robbins, a New York industrialist who agreed to put up \$1 million to acquire land in what became RTP, eventually amassing 3,559 acres he outright controlled or had options to under the name "Pinelands Co." The

## RESEARCH TRIANGLE PARK

Spanning 7,000 acres, Research Triangle Park is home to more than 100 research and development firms, many of which tap the nearby resources of the three universities that make up the Triangle: Duke University in Durham, the University of North Carolina in Chapel Hill, and North Carolina State University in Raleigh.



SOURCE: Research Triangle Foundation of North Carolina

second was Archie Davis, who succeeded Hanes at the helm of Wachovia and raised \$1.25 million in just 60 days to buyout Robbins in 1959. About 20 percent of the funds came from the Raleigh-Durham-Chapel Hill area, but the rest were from donors scattered across the state, all anonymous at the time. Pinelands became the Research Triangle Foundation, which endures today as the park's administrator.

Chemstrand was a significant addition, as was the official first tenant, the Research Triangle Institute, a contract research group. But between 1960 and 1965, no other big fish were landed, and people started to whisper about the park's prospects for survival. "There was skepticism and paranoia," Little says, summing up the local mood.

By 1965, the skepticism was history thanks to two enormous recruiting wins. The first was what became known as the National Institute of Environmental Health Sciences (NIEHS), which RTP agents had been pursuing for four years. The project, announced in January 1965, was valued at \$70 million and remains the nation's center of studying environmental

causes of human illness. UNC's School of Public Health, along with then-Gov. Terry Sanford's earlier support of John F. Kennedy's presidential bid, were believed to be key factors in the location decision.

Three months later came news that International Business Machines would build a 600,000 square-foot research lab at the park. IBM had been courted for seven years, according to Link. As Little tells it, IBM was persuaded in part by a UNC professor, Fred Brooks, who previously had worked as one of IBM's top researchers and developed the System/360 family of computers and Operating System/360 software. IBM today remains RTP's largest employer, with 11,000 workers at its campus.

After IBM and NIEHS, 21 more companies located in the park by 1969, followed by 17 more in the 1970s, 28 more in the 1980s and a booming 42 organizations in the 1990s. Employment leaped to more than 30,000 by 1990. The Triangle Universities Center for Advanced Studies, known around campus as TUCASI, was set up in 1975 by the RTP Foundation for the explicit purpose of keeping the three universities working together. Late that same year, the American Academy of Arts and Sciences agreed to locate the National Humanities Center on the TUCASI campus.

### An Unparalleled Success

Today all but 1,100 acres of the 7,000-acre park are developed. There are some 120 research organizations and companies. There are 13 miles of paved jogging trails and a "town center" with banks, restaurants, and a hotel. The park requires organizations to build on only 15 percent of their total property with wide setbacks from the street, making the area seem almost bucolic, with buildings hidden from the roadway. The total park payroll is estimated at \$2.7 billion, making the average salary about \$56,000.

Nobody accused former UNC System President Bill Friday of exaggeration when he said: "Research Triangle Park is the most significant

economic and political manifestation of will in the state in the last century.” Such is the park’s cachet that firms as far as 30 miles away have claimed RTP post office boxes so they can put “Research Triangle Park” and its famed 27709 ZIP code on their letterhead. (Equally, many firms just outside the official park borders still call themselves RTP tenants, and they have become a de facto part of the wider Research Triangle community.) A tenant tells the story of visiting Germany recently and telling the host that his organization had recently located in North Carolina. The host nodded knowingly and said: “Yes, we know about North Carolina. It’s in the Research Triangle Park.”

RTP’s wider economic impact is hard to overstate. In a 1999 report, a consulting firm estimated that more than \$300 million of private investment was generated in plants in the 10 counties surrounding the Triangle during the 1990s. Employment in “new line, technology-related” industries grew from 15 percent of all jobs in the region to almost half by the end of the 20th century.

The precise reasons RTP succeeded while so many other similarly aimed projects have faltered remains a bit of a mystery. The timing was good, with Sputnik’s orbit in 1956 having sparked government enthusiasm for research. The advent of air conditioning also made year-round working in the South more practical and comfortable. RTP wasn’t the first research park — Stanford Research Park, for instance, was founded in 1951 — but it was one of the first, and as such achieved crucial “first-mover” advantage over would-be competitors.

In his histories of the park, Prof. Link cites three obvious factors in

RTP’s favor: “dedicated people, three outstanding universities, and a world-class research institute.” But to Link, the key is the presence of the research institute TUCASI — without it, an official forum for the three universities to cooperate wouldn’t exist. It is the convergence of the three schools, the combining of their talents and resources, that has propelled RTP to the top, Link believes. “There is one unique aspect of the infrastructure of the park unrivaled by any park in this country, and that is TUCASI.”

### The Future

The present-day state of RTP also contains some troubling signs: old, vacant buildings and an economy that no longer seems to favor geographic clusters the way it used to. Which brings us back to Rick Weddle, who took over the job of RTP president after his predecessor, Jim Roberson, retired in July 2004. When people ask him, “Isn’t it about finished?” Weddle is adamant in his response: “The reality of the matter is it is just now beginning.”

Here is what Weddle is selling: RTP is not in a city; its area is 75 percent in Durham County and 25 percent in Wake County. Thus, landowners don’t pay municipal property taxes, just those of the county. They are also members of the park’s owners and tenants association, which is like a big homeowners association that helps manage growth. Tenants are part of a special tax district whose rate is about 2 cents per every \$100 of property valuation — adding, for example, \$2,000 to the annual tax bill for a firm with a \$10 million lab. The RTP Foundation, which is funded chiefly by the land liquidations valued at \$3 million annually, is a service unit whose job is “to wake

up each and every single day thinking about how to add value to a defined set of companies,” Weddle says.

University access is by no means the exclusive right of RTP tenants, but the park remains a central hub for interaction among UNC, Duke, and N.C. State, and the university presidents sit on the RTP Foundation board.

Weddle sees an RTP where none of the workers have to drive on Interstate 40 to get to their offices, because they’ll be able to ride a high-speed rail into the park and walk the rest of the way. He sees residential development, for the first time, inside park borders, along with new retail options. But the focus is shifting from just selling land to “harmonizing the knowledge assets in the region,” which means throwing the weight of RTP — the brand — beyond park borders and across its wider sphere of influence.

The payoff, Weddle says, will be that the park can grow so that it employs as many as 90,000 people under current density rules; should those rules be loosened, as many as 150,000 jobs are envisioned. Weddle wants to steer RTP from being known as solely the home of large-facility, multinational organizations to one having a portfolio of diverse firms, spanning industries and sizes, from startups to mature cash cows.

It sounds incredible. The only thing keeping people from guffawing at Weddle is the position from where he sits. There remains nothing else quite like Research Triangle Park. So Weddle feels perfectly justified in saying things like: “I’m excited and optimistic because I still see most of the world trying to copy the *way we were*. That gives us the opportunity to begin to develop the *way we’re going to be*.” **RF**

### READINGS

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