

Out of the Ashes

Winston-Salem is transforming its economy from tobacco to medical research

BY TIM SABLİK

Downtown Winston-Salem, N.C., used to be the heart of tobacco manufacturing in America. Factories and warehouses belonging to R.J. Reynolds, once the largest tobacco company in the world, dominated the cityscape. Today, instead of cigarette machines and factory workers, many of those buildings house medical lab equipment and researchers from Wake Forest University's School of Medicine, Forsyth Technical Community College, and Winston-Salem State University, as well as more than 60 companies.

The activity downtown is a welcome change for residents after turbulent times. For most of the 20th century, locals had grown accustomed to decade after decade of growth. But for the first time in 1980, the city's population declined. Then the real bad news began. McLean Trucking, the fifth-largest trucking company in the country and employer of some 10,000 people in Winston-Salem, declared bankruptcy in 1986. Piedmont Airlines, renowned for bringing a bit of the city's Southern hospitality to fliers across the country, was acquired by USAir in 1988; the new owners promptly shifted over 5,000 jobs from Winston-Salem to other locations. That same year, AT&T closed an office in the city that at its height had employed about 13,000 people. But the worst dagger to the city came in 1987, when Reynolds' new management moved the company headquarters to Atlanta.

"City leaders had counted on these companies to provide their growth," says Gayle Anderson, president and CEO of the Winston-Salem Chamber of Commerce. "All of a sudden, that wasn't going to happen anymore."

The Rise of Camel City

Like much of the South, neighboring Winston and Salem, N.C., owed their initial growth largely to two plants: cotton and tobacco.

"King Cotton" came first, with Salem's first textile mill opening in 1836. At the turn of the 20th century, Pleasant H. and John Wesley Hanes started the clothing company that would go on to become a globally recognized brand. Winston, established after Salem in 1849, gravitated toward tobacco. In fact, the Hanes brothers initially came to Winston in 1872 to make their fortunes in the tobacco industry. But the true heir to "King Tobacco" would arrive two years later.

Richard Joshua Reynolds was drawn to Winston by the newly constructed North Western North Carolina Railway spur connecting the town to Greensboro, N.C. The Forsyth County soil was also perfect for growing North Carolina's popular bright-leaf tobacco. The son of a Virginia tobacco

farmer and manufacturer, Reynolds established his first "little red factory," which was no larger than a tennis court, next to the railroad track and began producing his own blend of chewing tobacco.

By the time Winston and Salem merged in 1913, Reynolds had established himself as the dominant tobacco maker in town. That year, he introduced Camel cigarettes to the country. They were an instant hit. In the first year alone, Reynolds produced more than 1 million Camels. By 1921, his company was making billions of them, and they accounted for half of the cigarettes smoked in the United States, earning Winston-Salem the nickname "Camel City." America's entry into World War I was good for Reynolds and Hanes, which supplied cigarettes and undershirts for soldiers. Winston-Salem was importing and exporting so many goods and materials that it was declared a "port of entry" by Congress in 1916 — the farthest inland port up to that time and the eighth largest in the country.

People flocked to Winston-Salem as its businesses roared into the 1920s. Between 1910 and 1920, its population more than doubled from about 22,000 to 48,000, making it briefly the largest city in North Carolina. While not a "company town" per se, one didn't have to look far to see Reynolds' influence on Winston-Salem. From the 22-story R.J. Reynolds Tobacco Building (recognizable to anyone familiar with the Empire State Building, since the architects used a scaled-up version of the same design for the iconic New York skyscraper), to the smokestacks of the Bailey Power Plant emblazoned with the company name, to the Reynolda House Museum of American Art, Reynolds' name is everywhere. As a number of local histories recount, not much happened in the city without the approval of Reynolds executives.

Residents didn't resent this relationship, however. Reynolds offered well-paying jobs with good benefits, and company executives gave generously to build their community. A fund established by the family of Bowman Gray, the company's third president, helped create a medical school at Wake Forest University, and members of the Reynolds family persuaded the university to move to Winston-Salem in 1956. Two years later, Reynolds became the largest tobacco company in the world, and its success spurred the growth of supporting businesses like McLean Trucking and Wachovia Bank, which handled Reynolds' accounts. Then, things started to unravel.

Up in Smoke

Signs of trouble came slowly at first. Studies linking cigarette smoking to lung cancer began trickling in during the 1940s



Winston-Salem's skyline preserves the past as it looks to the future. The Bailey Power Plant, which once fueled factories for R.J. Reynolds Tobacco Co., is being renovated as part of a new research and innovation district.

and 1950s. In 1964, the Surgeon General issued its first report warning that smokers faced a much higher risk of developing lung cancer and other lung diseases than nonsmokers. While Reynolds and other tobacco manufacturers fought these charges, the company was also facing increasing competition from within the industry. In 1972, Phillip Morris unseated Reynolds as the top cigarette maker in the world (though Reynolds managed to hold on to its number-one position in America for about another decade).

In response to these pressures, the company sought to diversify. R.J. Reynolds Tobacco Co. became R.J. Reynolds Industries and began acquiring various beverage and food makers. In 1975, it also started work on a new, modern tobacco factory in northern Forsyth County dubbed "Tobaccoville." In the end, both moves would end up working against Winston-Salem residents.

When Tobaccoville opened in 1986, Reynolds shifted its workforce from the older facilities in downtown Winston-Salem to the new factories, abandoning earlier plans of revitalizing the downtown factories as the company's finances continued to decline. Although Reynolds executives originally intended to simply move existing employees to the new facilities, they quickly realized they had a problem. Tobaccoville had been built to take advantage of the latest computerized machinery to minimize costs, but most Reynolds employees did not have the training to operate it.

At the same time that new technology threatened to make the local workforce obsolete, changes within the company further weakened local ties. As part of its diversification effort, Reynolds had acquired Nabisco Brands Inc. in 1985 and the two companies merged into RJR Nabisco. Nabisco's chief executive, F. Ross Johnson, quickly maneuvered to the top of the new company. An outsider originally from Canada, Johnson saw little reason to keep RJR Nabisco in "bucolic" Winston-Salem, as he called it. Within days of becoming CEO, he persuaded the board to move the company headquarters to Atlanta and organized a leveraged buyout of the company in 1988, which was the subject of the Bryan Burrough and John Helyar book *Barbarians at the Gate*.

On June 29, 1990, the last operating Reynolds factory in

downtown Winston-Salem closed. It was a bleak epilogue to a rapid exodus of employers that had left the community stunned. "We knew we had to do something different," says Anderson. "The question then became: What?"

Doing Something Different

Winston-Salem is hardly the first American city to grapple with the loss of its defining industry. From an economic perspective, cities develop because there is some benefit to firms and people from being in that location. A successful firm like Reynolds can attract other businesses, either in the same industry or across industries, that mutually benefit from being near one another. These benefits include sharing a pool of specialized labor, sharing access to raw materials or transportation infrastructure, and sharing knowledge. Economists refer to these advantages as "agglomeration economies."

But what happens to a city when the industries that produced these agglomeration economies decline or disappear? It's possible that new firms will move in, be successful, and start the cycle of growth all over again. That could take decades, though, if it happens at all. This has led many leaders of declining cities to ask: Are there policies that can expedite the development of new clusters of growth?

One option is to attempt to spur agglomeration economies from knowledge spillovers from the education sector to the business sector. Firms that operate in a research field may be drawn to locate near prominent research universities in order to benefit from collaboration with researchers and to gain access to a skilled workforce of graduates. But first, some believe, they need a common collaborative space to work in.

The plan to build such a space in Winston-Salem began in the late 1980s. Douglas Maynard, chairman of the radiology department at Wake Forest University's Bowman Gray School of Medicine, was interested in bringing the latest medical imaging technology to the school. But Maynard needed engineering expertise to help train medical students in the use of the new devices. Wake Forest did not have an engineering program, and it was unclear how soon they would be able to develop one. The original plan Maynard pitched to local leaders was to create a research park where Wake Forest could collaborate with other universities in the Piedmont Triad area (comprised of Winston-Salem, Greensboro, and High Point).

"It was going to be Research Triangle Park West," says Anderson, who was involved with the project from the beginning in her role at the Chamber of Commerce.

The Research Triangle shared among universities in Durham, Raleigh, and Chapel Hill was the blueprint for a successful collaborative space between education and business. But after talking with a consultant, Vernon George, project organizers quickly realized that trying to copy that model wouldn't work for them. George told them that most of the intellectual capital in Winston-Salem was in the School of Medicine. Positioning the research park outside of town, far away from the campus, would make it less likely to succeed, he believed.

The Innovation Quarter Takes Shape

The Piedmont Triad Community Research Center opened in 1994 in an old Reynolds building in downtown Winston-Salem. It initially housed the Bowman Gray School of Medicine's department of physiology and pharmacology and researchers from Winston-Salem State University. The park proceeded slowly from there. The first planned expansion into the historic Reynolds Factory No. 256 went up in flames — literally — when the building burned down during renovation work.

But organizers didn't give up. In 2002, the CEO of Wake Forest University Health Sciences, Richard Dean, announced plans for a much larger park encompassing roughly 200 acres in downtown Winston-Salem. This space would accommodate more science programs from the medical school and private research companies, as well as new residential homes and retailers. This larger vision was facilitated by additional building donations from Reynolds. The first buildings of this new expansion opened in 2006. The park continued to grow, housing more departments from the School of Medicine and a growing number of private firms. For example, Inmar Inc., a data analytics firm, moved its headquarters and about 900 employees to the park in 2014. The prior year, the park was renamed Wake Forest Innovation Quarter, reflecting both its more local focus and evolving goals.

"The difference now is the word 'community,'" says Eric Tomlinson, the president of the Wake Forest Innovation Quarter and chief innovation officer of Wake Forest Baptist Medical Center. Rather than building a park just for researchers, Tomlinson says organizers began looking at how to make the Quarter part of "a district for innovation, where people will work, live, learn, and play."

Project organizers hired Wexford Science and Technology, a development firm based in Baltimore that partners with universities to design and build such mixed-use spaces. Daniel Cramer, executive vice president at Wexford, says that the Winston-Salem project posed unusual challenges. The buildings that Reynolds had donated were on the National Register of Historic Places, which meant that efforts to redevelop them qualified for federal and state historic tax credits. While this made the project more affordable, it also meant that architects could not simply demolish the buildings and start from scratch. They had to find a way to fit modern research, residential, and retail spaces in the shells of turn-of-the-century tobacco factories.

Many of the buildings housed very specialized, and oddly shaped, equipment. The latest project involves converting a power plant, the iconic Bailey, into a place for shopping and entertainment — not something the

structure was originally designed for.

"The buildings don't lay out quite the way you would want them to, but they are all fabulous buildings," says Cramer.

Preparing the Workforce of the Future

Winston-Salem is not the only city that has attempted to pivot its local economy from manufacturing to health care research. But will the local workforce be able to take advantage of this new economy?

A 2003 working paper by Edward Glaeser of Harvard University and Albert Saiz of the Massachusetts Institute of Technology found that cities with high levels of human capital are more likely to grow and adapt to economic shocks. (See also "Education and Vulnerability to Economic Shocks in the Carolinas," p. 32.) But as Reynolds' experience with Tobaccoville highlighted, the skills of workers in Winston-Salem have not always lined up well with the changing needs of employers.

"There are maybe 1,000 technical jobs posted today that are going vacant because we don't have enough people in the community with those skills," says Anderson. Educators like Wake Forest and Forsyth Technical Community College can provide training but only if workers seek it out. Much of the local workforce is older, Anderson says, making them less inclined to return to school and acquire new skills. And because of the long history of steady, well-paying factory jobs with Reynolds, "there is still a mentality here that you can graduate from high school and get a really good job," she says.

While the more technical jobs in the Quarter don't directly replace the manufacturing jobs lost in Winston-Salem, Anderson says the Chamber of Commerce estimates that most of the roughly 3,000 jobs in the Innovation Quarter have been filled by locals. And there are more developments to come. In October, organizers for the Quarter announced plans for a new building containing affordable apartments, retail space, and parking.

Meanwhile, Anderson is already thinking about the next big project: repurposing an old Reynolds manufacturing center three miles north of the Innovation Quarter called Whitaker Park. Its proximity to Smith Reynolds Airport, a small general aviation airfield, could be attractive to businesses that outgrow the Innovation Quarter or to new firms drawn to Winston-Salem. Just as the tobacco boom didn't last forever, Anderson knows that the health care sector may not grow forever either.

"That's why I ask my board all the time, 'what's the next big thing?'" says Anderson. "Because if you're not thinking about that, it's going to come up from behind and smack you!"

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