Metropolitan Policy Program at BROOKINGS

A RESTORING PROSPERITY CASE STUDY

LOUISVILLE, KENTUCKY

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A May, 2007 Brookings Institution report, "Restoring Prosperity: The State Role in Revitalizing American's Older Industrial Cities" examined how 302 U.S. cities fared on eight indicators of economic health and vitality. Based on this research, we identified 65 underperforming cities, most of which are older industrial communities in the Northeast and Midwest, relative to their peers nationwide. The report describes why the moment is ripe for the revitalization of these communities, and lays out a comprehensive agenda for how states can—and must—assist in the process.

While the central focus of the "Restoring Prosperity" report was on cities facing the steepest economic challenges, analysis of the 302 database cities also revealed that a number were able to raise their economic status over time. In fact, 17 of the 302 would have been in the lower tier of cities in 1990, but by 2000 had moved off the "list," including:

Akron, OH	Chicago, IL	Louisville, KY	Spokane, WA	akima, WA
Anderson, IN	Duluth, MN	Mobile, AL	St. Joseph, MO	
Battle Creek, MI	Lafayette, LA	Monroe, LA,	Toledo, OH	
Chattanooga, TN	Lake Charles, LA	Pueblo, CO	Waco, TX	

To be sure, these cities' relative performance improved for a wide array of reasons, some of which may be difficult to fully pinpoint. But to better understand the extent of recovery, and, importantly, some of the chief drivers behind it, Brookings commissioned in-depth case studies of three on the list—Akron, Chattanooga, and Louisville. While each city, and its story, is unique, together the studies help illustrate just what it takes to put a weak market region back on the road to economic recovery. In doing so, they provide important lessons, as well as hope, for other communities that are striving to compete in a new economic era:

- **Strong leadership is essential.** Vital to the revitalization of each of these communities was strong leadership, which, self-evident as its importance may be, can't be taken for granted. In each city, civic and political leaders' willingness to come together to develop and implement a bold vision for recovery was *the* key driver of change. Without such leadership, these cities would have been unable to move beyond the parochialism, conflict, and inertia that continue to weigh many older industrial regions down.
- **Success requires vision and planning.** While serendipity and luck are often cited as important, if underrated, components of economic success, bold vision and a clear strategy are stronger bets. In all three of these communities, strong leadership was manifested in the creation and implementation of a defined vision and plan for reaching it—whether focused on transforming the physical landscape, as in Chattanooga, uniting the political and economic region, as in Louisville, or promoting better cooperation between the city, its suburbs, and the broader region, as in Akron.
- **You're all in it together now.** Strong leadership comes in many forms, and emerges most forcefully when leaders from different sectors work with one another toward common goals. These communities were able to turn their best laid plans into concrete actions—and concrete successes—because business, government, and the non-profit communities all recognized the dire need to change their city's current trajectory, and put their respective strengths to work, collaboratively, for change.
- **Place matters—take advantage of it.** The history of where, why, and how cities grew as they did provides an important backdrop to their present economic, cultural, and social development. Just as cities can overcome the disadvantages of place—limited water supply, cold weather, earthquakes—so, too, must they recognize, and maximize, the advantages. Each of these cities has made capitalizing on their respective assets—the river in Chattanooga, the central location of Louisville, expertise in polymer chemistry in Akron, and the downtown core of all three—a principal part of their recovery strategy.

While the above bullets describe major themes of the three studies, they only tell part of the rich and distinctive narrative of how each has managed to overcome a host of economic obstacles over the past several decades, despite the challenges they still face. Still, together they demonstrate that with the right combination of leadership, cooperation, strategy, and ingenuity, distressed cities—working together with regional and state leaders—can begin to reshape and reinvigorate their economies, and advance their future prosperity.

I. Introduction and Executive Summary

Louisville/Jefferson County is the principal city of America's 42nd largest metropolitan area, a 13-county, bi-state region with a 2006 population estimated at 1.2 million. It is the largest city by far in Kentucky, but it is neither Kentucky's capital nor its center of political power.

The consolidated city, authorized by voter referendum in 2000 and implemented in 2003, is home to 701,500 residents within its 399 square miles, with a population density of 4,124.8 per square mile.[2] It is either the nation's 16th or its 26th largest incorporated place, depending on whether the residents of smaller municipalities within its borders, who are eligible to vote in its elections, are counted (as local officials desire and U.S. Census Bureau officials resist). The remainder of the metropolitan statistical area (MSA) population is split between four Indiana counties (241,193) and eight Kentucky counties (279,523). Although several of those counties are growing rapidly, the new Louisville metro area remains the MSA's central hub, with 57 percent of the population and almost 70 percent of the job base.[2]

Centrally located on the southern banks of the Ohio River, amid an agriculturally productive, mineral rich, and energy producing region, Louisville is commonly described as the northernmost city of the American South. Closer to Toronto than to New Orleans, and even slightly closer to Chicago than to Atlanta, it remains within a day's drive of two-thirds of the American population living east of the Rocky Mountains.

Photo courtesy of Waterfront Development Corp.

This location has been the dominant influence on Louisville's history as a regional center of trade, commerce and manufacture. The city, now the all-points international hub of United Parcel Service (UPS), consistently ranks among the nation's top logistics centers. Its manufacturing sector, though much diminished, still ranks among the strongest in the Southeast. The many cultural assets developed during the city's reign as a regional economic center rank it highly in various measures of quality of life and "best places."

Despite these strengths, Louisville's competitiveness and regional prominence declined during much of the last half of the 20th Century, and precipitously so during the economic upheavals of the 1970s and '80s. Not only did it lose tens of thousands of manufacturing jobs and many of its historic businesses to deindustrialization and corporate consolidation, it also confronted significant barriers to entry into the growing knowledge-based economy because of its poorly-educated workforce, lack of R&D capacity, and risk-averse business culture.

In response, Louisville began a turbulent, two-decade process of civic and economic renewal, during which it succeeded both in restoring growth in its traditional areas of strength, most notably from the large impact of the UPS hub, and in laying groundwork for 21st century competitiveness, most notably by substantially ramping up university-based research and entrepreneurship supports. Doing so required it to overhaul nearly every aspect of its outmoded economic development strategies, civic relationships, and habits of mind, creating a new culture of collaboration.

Each of the three major partners in economic development radically transformed themselves and their relationships with one another. The often-paralyzing city-suburban divide of local governance yielded to consolidation. The business community reconstituted itself as a credible champion of broad-based regional progress, and it joined with the public sector to create a new chamber of commerce that is the region's full-service, public-private economic development agency recognized as among the best in the nation. The Commonwealth of Kentucky embraced sweeping education reforms, including major support for expanded research at the University of Louisville, and a "New Economy" agenda emphasizing the commercialization of research-generated knowledge. Creative public-private partnerships have become the norm, propelling, for instance, the dramatic resurgence of downtown.

The initial successes of all these efforts have been encouraging, but not yet sufficient for the transformation to innovation-based prosperity that is the goal. This report details those successes, and the leadership, partnerships, and strategies that helped create them. It begins by describing Louisville's history and development and the factors that made its economy grow and thrive. It then explains why the city faltered during the latter part of the 20th century and how it has begun to reverse course. In doing so, the study offers important lessons for other cities that are striving to compete in a very new economic era.

II. Context and History

A. 1778–1860: Revolutionary Outpost to Mercantile Center

Modern Louisville owes its existence and its economic foundations to the formation 380 million years ago of a coral reef under Devonian Era seas. An outcropping of that reef's fossilized remains constituted the only stretch of the 981-mile Ohio River that early U.S. settlers could not navigate safely.[3] It was there in 1778, at the head of the two-mile stretch of rapids known as the Falls of the Ohio, that a band of Virginia militiamen set up a Revolutionary War outpost from which to drive the British from the Illinois country. The following year, their companions established a town at the site and named it Louisville in gratitude for the French king's support of America's rebels. After the malarial swamps had been drained, after the Indians had been defeated, and after the manifold economic opportunities of a forced portage at a strategically crucial location began to multiply upon themselves, the town grew, inevitably at first and willfully thereafter, to become the only major city on the southern banks of the Ohio River.

That river, which today remains an important route of transport and a central feature of the bi-state community's life, was the major thoroughfare for the nation's westward expansion and for the burgeoning trade and manufacture that followed it. Even after the first canal was opened in 1830, most travelers, crews, and cargos had little choice but to lay over before either being carried around the falls to continue their journey by river or setting off overland for inland destinations. The city's early economy consisted of exploiting every advantage this geology and geography conferred and of filling every need—personal or pecuniary, upright or not—that the river traffic presented. The town grew steadily into a diverse, thriving, and colorful mercantile center, by all accounts bustling and bawdy, convivial and conniving, resourceful and rough.

Although Louisville would never become as large as Cincinnati, its constant rival on the northern banks of the Ohio just 100 miles upriver, it had by 1830 already become Kentucky's largest city, surpassing in size—though not in wealth, culture, or political power—the central Kentucky town of Lexington, then known as "The Athens of the West." Louisville's early hands, haulers, and shippers, and its early hotels, taverns, and gambling dens were quickly joined by traders, merchants, warehouses, and markets for the region's agricultural and textile bounty—tobacco, hemp, pork, and corn, and jeans—and for its surplus slaves, who were literally "sold down the river" at auction to the more labor-intensive cotton plantations of the deep South.

All this commerce required financiers to back it, insurers to guarantee it, and, to carry it, keelboats and wagons, then steamboats and engines, and later the railroads. Louisville obliged to produce them all in turn, and energetically began to seize the manufacturing opportunities, such as farm implements and furniture, that ready access to distribution presented. For the necessary labor, waves of German and Irish immigrants arrived to join the slaves and black freedmen. The result was an economically diverse and ethnically volatile mix (61,000 whites, 4,900 slaves and 1,900 free blacks) that made Louisville in 1860 the nation's 12th largest city. On the eve of the Civil War, it was an essential commercial and transportation link between North and South.

B. 1860–1900: A Regional Economic Capital

Abraham Lincoln declared that he had to have Louisville to prevail in the War Between the States, and after Kentucky's attempts at neutrality failed, he did have it, although only for the duration of the hostilities. In a common but oversimplified formulation—which obscures the competing beliefs, sympathies, and interests that violently sundered the bonds of class, commerce, friendship, and even kinship throughout this quintessential border city—Louisville was both pro-Union and pro-slavery in the great conflict that defined America.

Because of the city's strategic location, its varied manufacturing capabilities, and its unrivaled combination of river, rail, and road transport, Louisville became the Union's major staging, supply, and medical center in the western theater. Indeed, when General William Tecumseh Sherman began the infamous campaign that burned Atlanta and broke the South, it was Louisville that supplied him.

After the war, the city set out to play an equally pivotal role in rebuilding what it had helped destroy. Physically, Louisville had been spared from battle, and its economic infrastructure, buttressed by the victor's presence, was intact. But culturally, having been angered by emancipation and by the heavy hand of military authorities, it identified with the vanquished. Thus, Louisville became an economically promising and culturally comfortable haven for a cadre of business-minded former Confederates. Among them was the newspaper editor Henry Watterson, who was to become one of his generation's most nationally influential political voices. He was also one of his region's most vigorous proponents of an industrialized "New South," and his adopted hometown became an exemplar of that vision.

Every sector boomed. The city offered to supply the South with the goods it needed, while courting additional capital, distribution routes, and regional industrial expansion from the North, and it marketed itself to both in a series of grand industrial expositions that attracted millions of visitors over 15 years in the 1870s and 1880s. Key to the substantial trade in manufactured goods that resulted was the city's ability to deliver them via the famed Louisville & Nashville Railroad, which the city had created in an aggressive competitive coup in the 1850s and which, with even greater aggressiveness under its later owners, was expanded at breakneck pace into the dominant carrier throughout the South.

Manufacturing proliferated, supplied by the region's abundant resources, namely, coal, lumber, and pig iron, and by the agricultural produce from the surrounding region. The city boasted the world's largest producers of cast-iron pipes, plows, and bathtubs and significant producers of meat, paper, wood products, and jeans. The cement mills on the Indiana side of the river produced 90 percent of the nation's supply in 1890. The city's population, which had increased during the 1860s by nearly 50 percent, to 100,753, doubled during the next 30 years, to 204,731 at century's end.

During this, the nation's Gilded Age, Louisville was a fully gilded participant. Much of what came to be Louisville's enduring national identity, for good and ill, arose during this period. The city's already substantial tobacco market grew into the world's largest, driven by the immense popularity of the new, white burley variety that required exactly the growing conditions Kentucky offered. In 1870, the precursor of today's Fortune 1000 global corporation Brown-Forman organized and quickly contributed to the innovations in bottling, quality, and consistency that eventually led to a true national market for the city's and Kentucky's signature Bourbon whiskey. Five years later, the inaugural running of the Kentucky Derby took place before a crowd of 10,000 at Churchill Downs. A decade after that, the first Louisville Slugger was turned for a player on the city's American League baseball team, adding another icon to Louisville's pantheon of industrial production.

Similarly, many of the cultural, arts, and architectural attributes that still distinguish Louisville took shape in the late 19th century. In 1883, Macauley's Theatre staged the American premiere of Henrik Ibsen's "A Doll's House." Along Main Street arose what today remains the second largest collection, outside of New York's Soho district, of exquisitely ornate cast-iron warehouse and office buildings, and the merchants and industrialists who owned them created equally grand residential neighborhoods that survive today. When leading citizens set out in the century's last decade to engage a planner for the vast parks and parkways that still ring the city, they would accept no other than the father of American landscape architecture, Frederick Law Olmsted.

The defining economic event of this defining period was the Southern Exposition of industry and technology that opened in 1883. On a 45-acre site to the south, the city built an impressively grand edifice, then deemed to be the world's largest wooden building, and illuminated it with an unprecedented array of Thomas Edison's new incandescent electric lights. President Chester B. Arthur arrived for the opening, an indication of its perceived national significance in the economic reconciliation of North and South. The exposition proved so successful that it ran for five years.

A piece of pre-opening publicity boasted of the extraordinary growth in the city's manufacturing output, proclaiming, "It is evident that with cheap fuel, cheap lumber, and cheap coal, and unsurpassed transportation facilities, the future of Louisville is assured." Variations of that formula continued to drive the city's economy for another century. The future that was assured, however, was an increasingly competitive one as the nation's expansion moved on, its transportation networks proliferated and, eventually, its Sun Belt South rose to challenge Louisville's industrial position.

C. 1900–1970: A Rise in Industry and Culture

By 1900, Louisville's booming growth had already moderated, beginning the gradual decline that, despite a brief interruption, was to persist throughout the century. Louisville's population rank among American cities had fallen to 18th by then; by 1920, another 11 cities had eclipsed it, dropping it to 29th.

In response, in 1916, the city's business leaders embarked on a new strategy of financial subsidy to recruit and expand industry. They created a "Million Dollar Factory Fund," one of the first of its kind anywhere, and later named it the Louisville Industrial Foundation. It worked. Among the earliest catches were brothers from Virginia who gave their notable family name to the company they founded, the Reynolds Metals Co., and the foil wrap it soon developed.

Many others followed, and industrial growth surged during the Roaring '20s. More than 150 new factories opened within a single, five-year period in the middle of the decade, and the city's industrial base became even more diversified. By 1925, the small auto assembly operation that Ford Motor Co. opened in 1913 had expanded three times, and its 1,000 employees were producing 400 cars a day. Thousands of others labored to meet the nation's soaring demand for the new tobacco product introduced in 1913, the cigarette, and the Brown & Williamson Tobacco Corp. moved its headquarters from North Carolina in 1929. It was during this heyday that the Louisville Gas & Electric Co. erected on its massive riverfront generating station an electric sign that for four decades boasted to motorists arriving from the north the significance of the place they were entering: "Gateway to the South."

During the Great Depression, Louisville suffered neither significantly less nor more than the rest of America. Its banking community was scarred by the failure of BancoKentucky, which, in a scandal of fraud and manipulation, took down with it what was then the South's largest bank, the National Bank of Kentucky. But the cigarette plants stayed busy, and in 1933 Prohibition ended and the city's distilleries came back.

Four years later, misery reasserted itself when the epochal flood of 1937 inundated more than 60 percent of the city, requiring the evacuation of 230,000 of its 350,000 residents, killing 90 and causing more than $54 million in losses. The city proudly and rapidly rebuilt, but on the eve of another war, this time a world war, in which it would play an economically auspicious role, thanks to its geographic and transportation advantages, its diverse industrial base, its ample supply of electric power, and, coincidentally, those same distilleries.

In the 1940s, as in the 1860s, the conversion and enhancement of the city's industrial assets for wartime production occurred on a massive scale, and again, the results positioned it to partake in the post-war industrial boom. A short-lived experiment in building wooden cargo planes required the construction of an airport just south of the city, which today ranks among the world's top cargo handlers. Similarly, on the Indiana side of the river, more than 13,000 laborers went to work building LST landing craft and other vessels in the nation's largest inland shipyard, where American Commercial Lines Inc.'s Jeffboat subsidiary still produces barges today.

Washington invested more than $92 million in a "Rubbertown" complex of five chemical plants, which, using alcohol from the distilleries and employing 4,000, immediately became the world's largest source of synthetic rubber. A new Naval Ordnance Station began manufacturing torpedo tubes and other weapons components in buildings in the city's south end that today house defense contractors in a privatized technology park. The Army developed a 10,000-acre ammunition plant on the Indiana side of the river that continued to employ thousands of workers for three decades.

During the 1940s, the metropolitan-area population surged by 25 percent, or 131,000, with 50,000 of them, including more than 10,000 blacks, residing in the city itself. Then, in the 1950s, the population grew by another 25 percent, or 145,000, as stunning examples of the nation's new industrial might continued to arrive. International Harvester opened the world's largest wheel-tractor plant in the old cargo-plane factory at the airport. General Electric chose 300 suburban acres for its 16,000-worker Appliance Park, at the time the world's largest appliance manufacturing facility. Ford Motor Company replaced its 22-acre plant with a 180-acre one, located even farther out than GE's and hard by the new expressway that would soon become Interstate 65. The chemical plants in Rubbertown doubled in number.

Culture, too, flourished. A prescient group of city leaders, accurately foreseeing the limits of brawn, set off an arts renaissance, establishing one of the nation's first "Fund for the Arts" campaigns, backing a symphony orchestra that gained national acclaim and later creating an equally acclaimed repertory theater, Actors Theatre of Louisville. Adding to the luster, the voluntary integration of the city's racially segregated schools made Louisville a national model of Southern progress (although as a later federal court case made clear, the gesture proved more impressive for its symbolism than its substance).

The economic momentum continued into the 1960s, which saw the arrival of a second Ford assembly plant (the world's largest truck plant), the routing of three of the nation's new interstate highways into downtown, and early initiatives to respond to center-city decline. Even so, by 1970, the Louisville metro area fell to 39th nationally with a population of 905,000. Its growth was well behind each of its major competitors to the east, north, and west, and other cities throughout the South were fast gaining on it. But with more than one-third of the workforce still employed in manufacturing, many of them in well-paying jobs in high-value-added production, and with the city's substantial commercial, financial, and transportation bases still broad and diverse, most leading citizens remained entirely content with, and adamantly protective of, the size, convenience, and comforts of their community, which boosters proudly described as "recession proof."

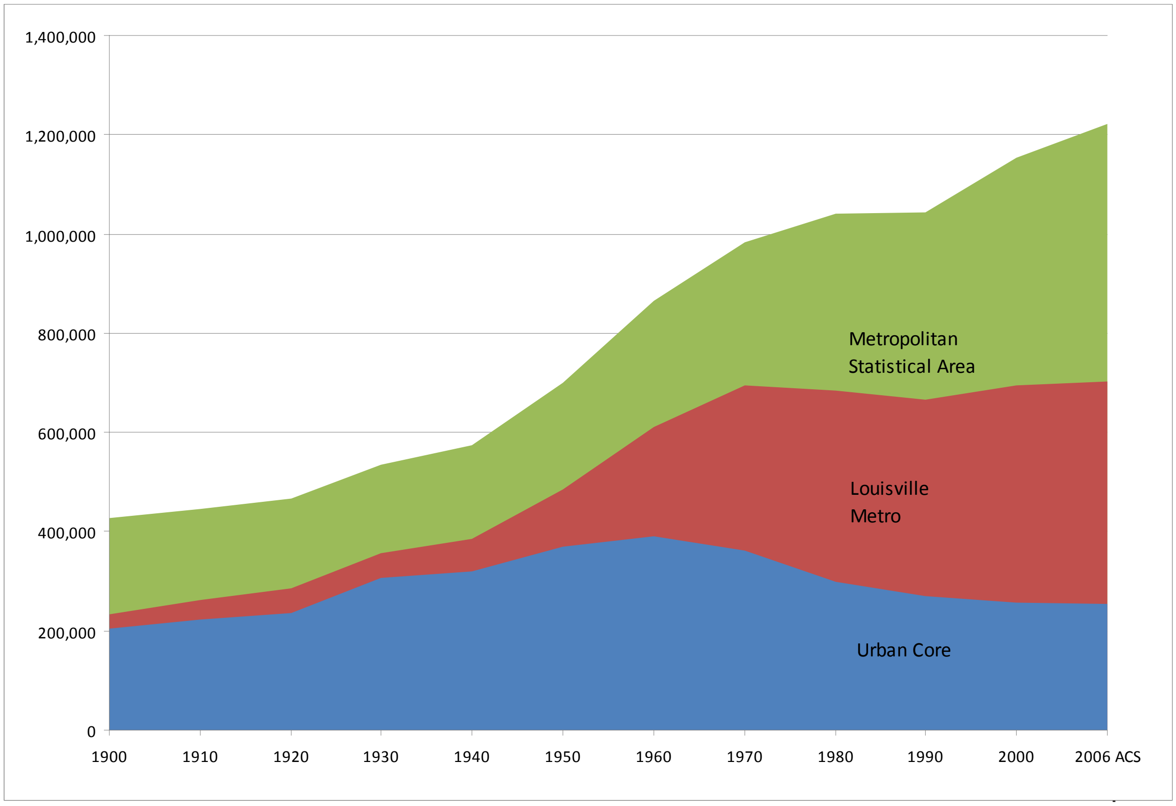
Louisville Political/Civic Timeline

1780	Assembly of Virginia establishes the town of Louisville, which will become the only sizable city that grows up on the southern banks of the Ohio River
1792	Commonwealth of Kentucky enters the United States as the 15th state
1837	Louisville City Council establishes a city college that becomes the precursor of the University of Louisville
1855	"Bloody Monday" election day ethnic violence leaves 22 dead
1861	Civil War breaks out, straining ties within the city and across Kentucky
1863	Emancipation Proclamation frees slaves
1865	In aftermath of the war, city becomes home to a number of influential former Confederates
1875	First running of the Kentucky Derby, won by Aristides
1879	Kentucky Normal and Theological Institute (later Simmons College) established as first institution of higher education open to blacks in Kentucky and, by 1931, one of only three liberal arts colleges accessible to black students in the United States
1891	New Board of Parks Commissioners recruits Frederick Law Olmsted to design three large suburban parks linked by parkways
1905	Louisville Free Public Library opens
1937	Great Flood of the Ohio River submerges much of city
1956	Suburban voters overwhelmingly defeat plan for extending city government and services
1961	Civil Rights Movement stages sit-ins at downtown businesses that lead to passage of public accommodations law, followed in 1967 by open housing ordinance
1975	In same year, city and county school systems merge creating 120,000-student Jefferson County Public Schools, and schools are desegregated amid violent protests, following federal court order
1980	Suburban Jefferson County population exceeds City of Louisville for first time, with referendum to merge city and county government defeated by 1,450 votes in 1982, followed by second referendum and defeat in 1983
1985	City and county enter into 12-year "Compact" inaugurating revenue sharing and freezing annexations and incorporations
1990	Kentucky adopts historic K-12 education reform, creating standards-based accountability
1997	Sweeping reform of state post-secondary education system establishes goals to build research capacity at the University of Louisville
1998	First phase of public-private Waterfront Park opens, substantially accelerating downtown riverfront revival
2000	Voters approve consolidation of city and county governments into Louisville Metro government created in 2003

Louisville Economic Timeline

1782	First traders leave recently established town headed for New Orleans, followed a year later by opening of first general store, tobacco warehouse, and commercial production of whiskey
1816	First insurance company incorporates and branch of the Bank of the United States opens
1831	Opening of first canal allowing navigation around the Falls of Ohio
1859	Louisville and Nashville Railroad runs first train from Louisville to Nashville in 10 hours
1861	Union loyalties prevail over Confederate sympathies, and Louisville becomes major staging, supply, and medical center for northern troops in the Civil War's western theater
1883	The Southern Exposition, at the time the second largest industrial and mercantile exposition in the nation's history, begins five-year run
1896	Local tobacco market ranks as world's largest
1913	Ford Motor Co. begins assembling automobiles in small Louisville shop
1916	Creation of "Million Dollar Factory Fund" to stimulate industrial expansion
1924	Survey finds 192 new industrial operations since 1920, identifying six as the largest of their kind in the nation and 18 as the largest in the South
1931	Brown & Williamson Tobacco Corp. relocates its headquarters to Louisville
1933	Repeal of Prohibition allows distilleries to reopen, followed in 1936 by construction of Seagrams plant touted as "most complete distiller in the world"
1940	Rapid transformation into nation's 18th largest defense supplier for World War II begins with establishment of large-scale synthetic rubber, gunpowder, naval ordnance, and ship- and airplane-manufacturing facilities
1946	Post-war industrial boom begins with International Harvester converting former airplane factory into world's largest tractor plant, covering 132 acres and employing 6,200 workers
1951	General Electric chooses Louisville as site for all of its appliance manufacturing, opening in 1953 the mammoth Appliance Park that soon employed 20,000
1969	Ford Motor Co. opens second plant, Kentucky Truck Plant, employing 4,600 workers, the last arrival of a major industrial plant
1970	First of Louisville's four major cigarette manufacturing plants closes, launching a decade that would see the loss of more than 30,000 manufacturing jobs
1987	Greater Louisville Economic Development Partnership established following $10 million "Campaign for Greater Louisville," and Presbyterian Church (USA) chooses Louisville for its headquarters, first tangible victory in struggle to redefine Louisville from older manufacturing city
1988	Major expansion of airport begins in conjunction with UPS decision to locate national hub
1996	Consultant shocks city's leaders by reporting Louisville is uncompetitive in all high-wage, high-growth sectors of the New Economy
1997	Public and private economic development activities consolidated into Greater Louisville Inc. – The Metro Chamber of Commerce, adoption of "Visioning" strategy to reposition Louisville for greater competitiveness
1998	UPS chooses Louisville for its all-points international hub and Worldport sorting facility, followed in 2006 by additional $1 billion expansion currently underway
2001	Cognetics ratings place Louisville in top 10 for entrepreneurial environment

Figure 1. Population Growth in Louisville MSA Compared to Louisville Metro, and Urban Core, 1900 to 2006



Urban Core is former city of Louisville
Louisville Metro encompasses Jefferson County, KY
Metropolitan Statistical Area (MSA) includes Jefferson and 12 surrounding counties in Kentucky and Southern Indiana

Source: U.S. Census and American Community Survey 2006
Analysis by Kentucky Population Research, University of Louisville for The Greater Louisville Project

III. Louisville's Decline

Of course, Louisville was not recession proof.   To the contrary, it had become highly vulnerable, economically and socially, to what the remainder of the century was about to deliver. Industrially, a new New South had arisen to supplant Louisville's older version, and everything from the city's worn infrastructure and increasingly depopulated core to its high-wage and strike-prone workforce made it more Rust Belt than Sun Belt. More important, although only dimly understood at the time, the new economy of knowledge work and global competition was also emerging. Despite Louisville's long run of prosperity, cultural enhancements, and progressive initiatives, the city had failed to prepare sufficiently for the change.

With a few very important exceptions, its private sector remained heavily concentrated in mature industries, often family-run and regionally oriented, and much of its business leadership came from the same insular culture, rather than from sectors more generative of entrepreneurial energy and innovation. Its financiers, too, had become notoriously risk-averse (and its banks, further hamstrung by Kentucky's rural-dominated legislature until it was too late, would later prove easy prey during the waves of regional consolidation). The city's inadequately funded municipal university, despite the long and venerable legacy of its professional schools, was seriously deficient in nearly every other important respect. The workforce, the vast bulk of which had arrived from rural Kentucky, was poorly educated.

The result was that both the private and public sectors were severely lacking in the capacities for technical, scientific, and research innovation that the emerging knowledge economy required. The preeminent symbol of the era's missed opportunities arose in the late 1950s, when the Reynolds Metals Co. proposed to build a major research and development facility on a suburban campus—the sort of installation cities would soon be clamoring to attract. Opponents succeeded in blocking first one and then the second of the firm's proposals, both times in the name of preserving suburban tranquility, and Louisville lost both that facility and the company's general sales office to Richmond, VA.

Socially and politically, the community was equally at war with its best interests. Louisville had always been torn by the conflicts endemic to a border city—a place where North collided with South, where abolition collided with slavery, where urban collided with agrarian, and where patrician culture collided with ethnic machine politics. But to those historic tensions, the demographics of the post-war boom had added rigid social and political fragmentation.

As in other older American cities, Louisville's core had deteriorated during the hardships of the Depression, as impoverished families left their homes for public housing, and then it had deteriorated more during the stringencies of war, when entire neighborhoods of fine old homes were converted into sleeping rooms for the influx of industrial workers. After the war, the well-paid workers flocking to the jobs in the massive suburban plants wanted little to do with the city's older neighborhoods, its congested downtown streets, or its dank riverfront warehouses and factories—and even less to do with the massive investment in infrastructure and services that modernization required.

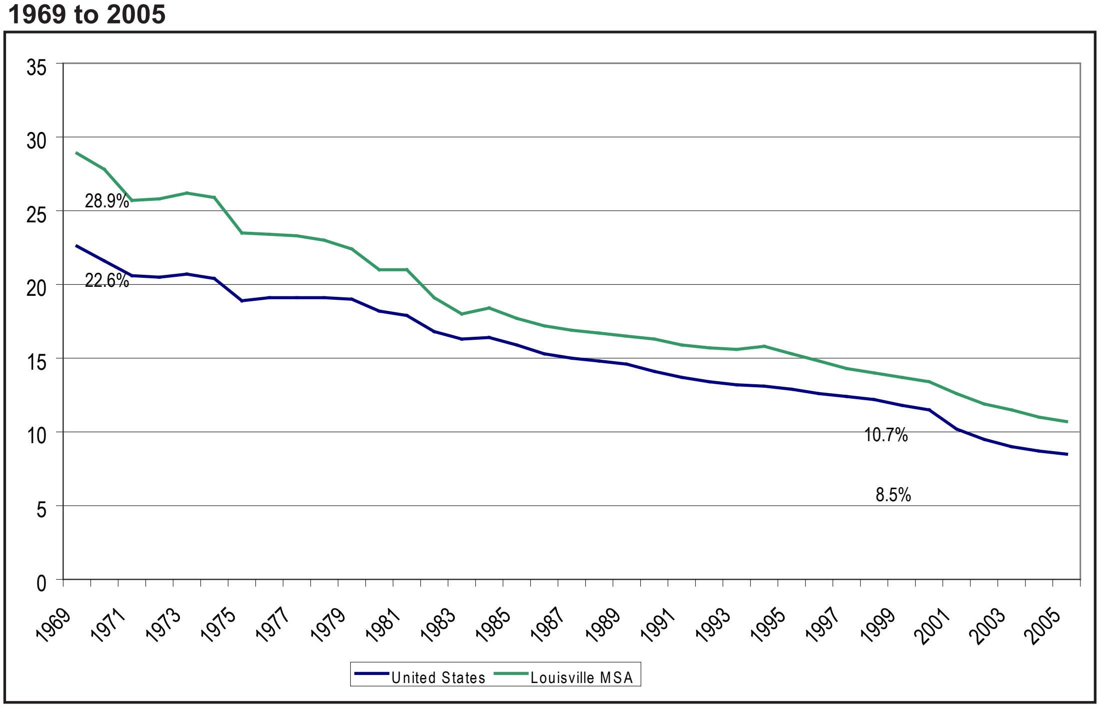
Although the metro area's population grew by nearly 219,000 between 1940 and 1960, 75 percent of that growth occurred outside the city's limits, overwhelmingly in unincorporated suburban areas. More dramatically, when the metro population grew by another 15 percent to nearly 905,000 during the 1960s, the core city's population dropped absolutely for the first time in history—by 7 percent, to 362,000 in the 1970 Census.

By then, Louisville and the surrounding Jefferson County had split into politically separate and routinely hostile enclaves—an increasingly poor, black, and highly taxed core city; a cluster of relatively affluent eastern suburbs, with scores of small cities more akin to homeowners' associations than municipalities; and a large swath of unincorporated, blue-collar neighborhoods to the south and southwest characterized by meager public services, inadequate roads, dysfunctional drainage, and deep resentments. All were further separated from their metropolitan neighbors to the north by the Ohio River, the Kentucky-Indiana state line that follows it, and a long history of mutual disdain. And in every other direction, they were surrounded by small rural Kentucky counties averse to change.

Racial dynamics exacerbated these divides. Segregation in Louisville may not have been as unapologetic, unchallenged, and unalloyed as in the deep South, but Louisville nevertheless remained legally and culturally racist in most important respects at mid-century, adding bigotry, rage, and gross economic inequality to the forces sundering it. Simply righting the legal injustices took three decades of conflict and struggle, including: in 1954, the bombing of a home a black couple had purchased in a white neighborhood and the subsequent sedition charges against the white activists who had helped them buy it; the destruction of the major black business district in the name of urban renewal; sit-ins, protests, and civil disobedience throughout the 1960s, capped in 1968 by a relatively small but highly consequential inner-city riot; and, in 1975, violent protests by suburban blue-collar whites against court-ordered busing for school desegregation. During those three tumultuous decades, white flight, primarily into unincorporated suburbs, reduced the core city's white population by 100,000, and the black minority grew from 16 percent to 28 percent of the total.

Thus, when the economic traumas of the 1970s and 1980s arrived, there was little good news to offset them and little social cohesion to absorb them. Louisville's economic fall was both rapid and steep. In the peak year of 1973, manufacturing employment in the metropolitan area stood at 137,000—34 percent of the total. Within seven years, nearly a fifth of those jobs, 30,000, had vanished, and during the 1980s, another 19,000 disappeared. GE alone shed 9,000 of its 22,000 job base in the 1970s, and then cut 8,000 more, reducing its total manufacturing workforce by 77 percent during the last decades of the 20th century. By 1990, the number of manufacturing jobs in the metropolitan area had fallen to 88,000, and they represented less than 20 percent of total employment, on the way to mirroring the national average at 13 percent.

Figure 2. Percent of Total Employment in Manufacturing Louisville MSA and U.S., 1969 to 2005



Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce. Data compiled by Kentucky Population Research, University of Louisville.

With the jobs went the people. During the 1970s, nearly 60,000 people left the metro area, bringing population growth nearly to a halt. The next decade was worse. During the 1980s, the core city lost 92,000 residents, the principal county of Jefferson lost 30,000, and the metropolitan area lost 5,000. At the decade's end, insult was added to injury—the bible of the marketing world, the *Survey of Buying Power*, dropped Louisville from its list of the nation's top 50 markets.

On top of the numerical losses, icons of Louisville's historic identity vanished. Belknap Inc., which had grown from its mid-19th century roots in farm implements to become the world's largest wholesale hardware distributor in 1960, was bankrupt by 1986. The last, shrunken remains of the L&N Railroad departed, leaving behind only the red neon initials on its historic headquarters building. American Standard, the plumbing fixtures giant that had begun as a brass molding works in 1858, closed its remaining Louisville operations. The huge International Harvester plant shut down as quickly as it had opened. Seagram's shuttered the expansive Art Deco distillery, warehouse, and office complex it had opened in 1936. Even the city's previously invulnerable cigarette plants began to be snuffed out. Three of the four plants, at which 8,000 workers had produced one-sixth of America's cigarettes in the 1960s, shut down between 1970 and 1984.[4] The breadth and rapidity of the decline struck at the heart of the city's self-image. For while it was true that Louisville had plenty of company in its misery and that many of the blows had been delivered by forces beyond local control, it was also true that some of the city's closest competitors, including Indianapolis and Nashville, and some of its traditional regional counterparts, such as Charlotte and Atlanta, had outpaced it in growth and economic vitality. The shock set off intense debate, and not a little acrimony, over what had happened, why, and what to do about it.

Certain of the city's leaders for years had warned of the dangers of economic complacency, antiquated government, low educational attainment, and declining competitiveness, but to little avail. The harsh confrontation with the new reality, however, created a more receptive audience for newer thinking. Among the most vehement voices were a group of younger business executives who could no longer be dismissed—the most successful incarnations of the new economic order.

They minced few words when interviewed for a 1981 series of articles published by *The Louisville Times,* aptly entitled "Louisville's Economy: Help Wanted." The late Wendell Cherry, a cofounder of the dynamic Humana, Inc., which by then had transformed itself from a nursing home operator into a hospital company (on its way to becoming the major health insurer it is now), described Louisville as "a little smug, complacent and provincial…not looking underneath and seeing the broader picture of the change to knowledge work." His partner, David Jones, Sr., faulted "a tolerance for mediocrity that surprised and appalled me."

Then-Governor John Y. Brown, Jr., the glamorous fast-food entrepreneur who had decamped to Tennessee while building Kentucky Fried Chicken into a national icon, declared, "The whole decade of the '70s passed them by... Louisville has been awful slow to break away from the old establishment thinking."

Seconding the assessment of those home-grown entrepreneurs was the executive then in charge of GE Appliance Park: "Hoping this will reverse if everybody hangs tough is ridiculous," he said. "There are just flat some negatives that have to be dealt with."

Coming to an accurate understanding of the extent of those negatives and then mobilizing the will and resources to deal with them would occupy Louisville's leaders for the remainder of the 20th century.

"You certainly had to work on the psyche of this community, which tended to be a 'don't push the envelope, don't take risks' kind of community,'' Louisville Mayor Jerry E. Abramson recalled about the situation he inherited when first elected mayor in 1985. "Thirty thousand jobs is a lot of jobs to lose in a couple of years."

IV. The Recovery Process

The task of rebounding from Louisville's economic and social traumas confronted its leaders with three distinct challenges. The first was the most quickly and clearly understood: to restore growth by searching out and seizing opportunities for which Louisville was already competitive. At this, the community proved highly successful. A series of public and private efforts begun in the mid-1980s combined with the national economy's strong performance in the 1990s to produce steady and robust growth in jobs, incomes and, to a lesser extent, population through the century's last decade.

The second challenge was equally apparent although more politically difficult: to repair the strains in civic functioning that hindered full exploitation of Louisville's assets and impeded the growth of new ones. At this, too, the community had considerable success during the closing decade of the century, restructuring its governance, reshaping its approach to economic development, and revitalizing its internal and external relationships.

The third challenge, the daunting scope of which was not fully accepted until the century's final years, was to develop the new assets and capacities necessary to make Louisville competitive in the new economy. At this, Louisville is still very much a work in progress, building on a vigorous start made in the late 1990s, when it began to significantly ramp up its life-sciences capacities, to leverage its substantial health enterprises and logistics sectors, and to expand entrepreneurial activity, financing, and support.

Louisville's concrete accomplishments in each of these areas are discussed below, but underlying all of them was another considerable achievement: the creation of substantially greater cohesion, collaboration, and cooperation and the dissipation of the inwardly focused conflicts that had long drained civic energies.[5] This shift took several forms:

- The business community, after a long period of turbulence, reorganized both itself and the community's entire approach to economic development to achieve new levels of sophistication and effectiveness. The final expression was the formation in 1997 of a new hybrid chamber of commerce with enough credibility and political support to serve, with government backing, as a full-service, regionally minded economic development entity.
- A stable cadre of unifying political leaders emerged who were willing to resist parochialism, take risks, and do heavy political lifting, from inaugurating city-suburban revenue sharing to overhauling planning and zoning. The final expression of their success was the voters' approval in 2000 of city-county government consolidation, the first such merger in a major metropolitan area in three decades.
- Chief among these leaders was Mayor Abramson, who served continuously from 1985 through 1998 and who was elected overwhelmingly in 2002 and again in 2006 as mayor of the new Louisville Metro, whose creation he had championed. The mayor was not alone, however. A succession of three highly constructive county executives, two of whom also served as Louisville mayor, also made major contributions to replacing a politics of grievance with a politics of progress.
- These same business and political leaders became adept at joining forces in creative public-private partnerships to oversee and finance a wide range of community improvements, from downtown developments to expanded early childhood education in the public schools, despite the significant financial, legal, and political constraints on Kentucky's local governments.
- A deep and solid base of economic knowledge was generated, which fostered the growth of a broad consensus, provided firm ground for strategic decisions, and stimulated greater professionalism and value-orientation in economic development.

The business community, in addition to employing national consultants, supported two decades of regular research, primarily by University of Louisville economist Paul Coomes, to monitor Louisville's economic performance, to periodically compare it with a stable set of peer cities, to perform thorough studies of specific industry sectors, and to elucidate regional and state economic development issues.[6]

- Finally, city-state relations improved markedly as Kentucky experienced its own belated awakening to the new economic order—and recognition of the importance of cities, education, and entrepreneurs in that order. The state mounted several aggressive initiatives from which Louisville benefited, including major efforts to climb the value chain in manufacturing, to reverse the long-standing educational deficits of its people, and to develop its research and commercialization capacities.

A. Rebuilding on Strengths

In its broadest outlines, the restoration of economic growth in Louisville in the 1990s tracked the nation's performance. The Louisville metropolitan area added more than 108,000 jobs over the decade, at a fairly steady rate of about 10,000 to 15,000 per year. This 21 percent growth rate was just slightly larger than the expansion nationally. Similarly, in the broadest outlines, the components of that growth mirrored the national experience. Seven of 10 new jobs were in the service sector, with the greatest rate of increase occurring in health care. The once outsized proportion of Louisville workers employed in manufacturing continued its steady descent toward the national average.[7]

Photo by Dan Dry for Louisville Convention and Visitors Bureau

Some of the growth, however, represented not just the inexorable local ramifications of the national economy, but successes for which Louisville had vigorously and deliberately prepared itself in the mid-1980s. One factor, of certain but not quantifiable significance, was an aggressive business attraction campaign created by a frustrated group of influential CEOs, including the heads of the banks, newspaper, utility, and other regionally minded companies. They first organized in the early 1980s, intent on bypassing the dysfunctions of the fragmented local governments and the limitations of the member-oriented chamber of commerce. Their combined clout enabled them to do just that while retaining the ability to mobilize the resources of both.

First known as Project 2000 and later developed into a more broadly based Greater Louisville Economic Development Partnership, the resulting organization functioned for a decade and a half as the driving force for rethinking the community's approach to economic development and for providing resources, research, and staff for a campaign of business recruitment similar to the old Louisville Industrial Foundation. It raised $20.2 million in two separate efforts, including $10 million in an initial “Campaign for Greater Louisville” that tapped a new well of civic aspiration.

“The fund-raising drive did more than just put money in the bank. It raised the bar for what the community's leaders were envisioning for the future of the region and helped change the mindset of leadership,” said Crit Luallen, a staff leader for the original Partnership effort and subsequently a top state official. “Those first meetings of the board of the ‘Campaign for Greater Louisville’ had an incredible energy and dynamism. The top CEOs were in the room and, together with the two top elected officials, were envisioning a new future for the community with a true spirit of public-private partnership.”

Mayor Abramson agreed. “The Partnership was an enormous symbolic step—raising $10 million from people who had never given to anything like that before—car dealers, the Jefferson County Medical Society, grassroots groups…It raised money, and it had the right people around the table. For the first time, we had the CEOs engaged in the issues of the day. It was a symbolic 'stepping up' to the challenge."

The business attraction results were simultaneously gratifying in the number of jobs, and discouraging in the nature of them. In an analogy used by one of its leaders, the Partnership hit a lot of singles, including a number of back-office processing operations; some substantial customer-service and call centers, which became the foundation for an even larger customer-service sector still being cultivated today; additional suppliers for the existing, and steadily outsourcing, major manufacturers; and a large number of distribution facilities attracted by the biggest driver of all, the new UPS hub at the airport. But there were only a few doubles and none of the home runs that had been anticipated in the form of major corporate headquarters and high-value, science and technology businesses.

The successes, though, were balm for a community still pummeled by the blows of deindustrialization, corporate consolidations, and globalization. Indeed, even as job growth resumed, the sense of loss continued to mount, as corporations based elsewhere took over nearly every one of the companies that had long dominated Louisville's civic life—including the Partnership's founders. By the time the century ended, Louisville's three largest banks, its highly respected newspaper, its premiere financial services corporation, and its energy utility all had succumbed to their industries' national and global consolidations. The city also had lost the headquarters of both BATUS, Inc., and Columbia/HCA Healthcare, which had taken over the hospitals Humana spun off.

These and other disappointments shattered any lingering illusions about the extent of the challenges ahead. But the simultaneous successes also created new confidence that, with smart, targeted, and aggressive action, the community could compete and eventually prevail. Chief among those successes were four that buttressed traditional Louisville strengths.

A Logistics Coup

One of the first actions of the Economic Development Partnership's corporate leaders was to provide critical political and financial support for what became the single greatest driver of Louisville's recent growth: the bold decision to undertake an expensive, politically difficult, legally fraught, and highly disruptive expansion of Louisville's centrally located airport. It ultimately required the relocation of 3,750 families and 150 businesses and the demolition of long-established neighborhoods. The primary beneficiary was to be the small package handling operation that had moved from Chicago in 1981 in search of a central location, milder winters, and ample warehouse space for an overnight airline service it was planning to create. Its name was United Parcel Service.

Today, well into its second $1 billion expansion, the 20,000-employee operation that resulted is the all-points, international hub for the UPS fleet, the site of the company's mammoth (on its way to 5 million square feet) Worldport package-sorting facility, the home of its new heavy-freight business, and the center of a steadily expanding array of related distribution, supply-chain, and time-sensitive logistics operations.

The New Yorker writer John McPhee introduced that magazine's readers to the remarkable scale, complexity, and ubiquity of this overnight delivery phenomenon by tracing the logistics of lobsters—trucked overnight from Maine to Louisville, rested in saltwater tanks near the airport, and then whisked again overnight to the world's greatest restaurants. *New York Times* columnist Thomas Friedman went further. His influential book, *The World is Flat*, described Worldport and the rapid, worldwide distribution of goods it allows as one of the ten forces reshaping the global economy.

Certainly, it is reshaping Louisville's economy. The city's previously modest Standiford Field has been renamed Louisville International Airport and in 2007 was the nation's third and the world's eighth busiest airport for cargo. It is performing in the global era a role somewhat similar to the one the L&N railhead played at the dawn of the railroad era.

The economic impact on the city has been far larger, far more diverse, and higher-wage than even its most optimistic advocates anticipated. At first, in the late 1980s and early 1990s, the chief effects were limited to the creation of a large number of part-time, peak-hour, overnight sorting jobs; the addition of a much smaller but higher-wage force of airplane pilots and mechanics; and the steady arrival of national retailers and shippers' “pick and pack” distribution centers. But as the business advantages of proximity to the hub became more apparent to time-sensitive businesses all over the world, a much wider diversity of logistics-minded companies with higher payrolls began to emerge. For instance, an entirely new concentration of overnight computer repair operations, employing thousands of technically trained workers, arrived to set up shop in close proximity to Worldport, including Best Buy's 500-employee Geek Squad operation.

Fostering this growth required repeated, varied, and creative public investments to ensure adequate airport, road, land, and workforce capacity. The political risk in undertaking the initial expansion was significant for Mayor Abramson, who launched the effort before anyone could fully anticipate the results. The ongoing disruptions to and development of nearby areas have also required creative and costly action by the governors, congressional representatives, legislators and other elected officials who were the mayor's partners. For instance, the Louisville Regional Airport Authority eventually financed the development of a new, 287-acre subdivision for displaced residents who could not find comparable housing in comparable neighborhoods, and Kentucky authorized a pilot program of tax increment financing to allow development of a 3,000-acre industrial park just south of the airport.

The most creative innovation, however, stands out for the level of ongoing mutual benefit it provides. As UPS was planning in 1997 for the expansion that would become Worldport, it had concluded that locating it in Louisville was risky because of an inadequate labor supply. At an emergency, Sunday summit called by Kentucky's governor, leaders of the University of Louisville, the separate community and technical colleges, and local government agreed to an unprecedented solution: a financial partnership with UPS that came to be called Metropolitan College and that transformed UPS's thousands of part-time jobs, which require odd shifts for relatively low wages in the middle of the night, into an unprecedented opportunity for education. Through the partnership, eligible UPS workers receive free postsecondary education and support. UPS not only attracted the workers it needed, but it also substantially reduced the high turnover rate in the targeted operations by redefining the jobs in “the sort” into work for college students. More than 10,000 young adults from all over Kentucky have participated, enhancing their individual prospects as well as the educational attainment of Louisville's and Kentucky's workforce.

University of Louisville economists calculate that the recurring direct, indirect, and induced economic impact since the airport expansion began in 1986 has been the addition of about 36,000 jobs and $1.8 billion in payroll to the regional economy.[8]

Manufacturing Stabilization

A second major accomplishment that paid off in the 1990s was the repair of the city's labor climate, which a decade earlier had threatened to exacerbate the already painful losses of good-paying manufacturing jobs. In the early 1980s, local and national business publications referred to Louisville as “Strike City,” a moniker that struck fear in the business community. The costs of strikes in both money and quality posed a palpable threat that the two largest manufacturing employers, GE and Ford, would shift more production to facilities elsewhere.

An ad hoc committee of business and labor leaders, headed by one of Ford's most credible and skilled plant managers, addressed at the community level the same labor-management problems that companies and unions were confronting at individual plants. Institutionalizing the same impulse, the University of Louisville School of Business created a Labor-Management Center, which offered training and awards to foster greater partnership and innovation in unionized industries.

During the next decade, these efforts produced the desired results. More constructive labor-management relations turned around the performance of Ford's auto-assembly plant, preparing it just in time to ride the 1990s wave of SUV popularity. The plant became a primary producer of Ford's leading models, and its performance improved so much that the company shifted production to it rather than away from it. A similar turn-around occurred at GE's Appliance Park, where work stoppages and bargaining brinksmanship had been endemic. At one crucial turn in the mid-1990s, company executives reversed an announced realignment of production after the local union proposed a plan for increased efficiency. Then-CEO Jack Welch publicly expressed his thanks. Subsequently, GE made Appliance Park the headquarters of its combined Consumer and Industrial division, leading to a small increase in executive employment and securing the presence of a sizable number of engineering and design professionals.

As Joe Reagan, chief executive of Greater Louisville, Inc., said, "If you look at it as a stock portfolio, we happened to have in our portfolio as a community companies in the manufacturing sector that were better positioned in the 1990s than the sector as a whole. Ford was the most prominent of those companies…. GE Consumer Products was another."

During this same period, Louisville's manufacturers also benefited from Kentucky's aggressive and controversial use of investment incentives in new and expanded industrial operations, including grants for the retraining of workers under its Bluegrass Skills Corporation program. The clearest sign of the state's seriousness was in 1985, when it created an unprecedented $147 million incentive package to attract Toyota's first North American assembly plant to Georgetown, KY. As a result, Kentucky's automotive sector grew into one of the nation's top five, an extensive economic asset the state is eager to keep.[9] These efforts in conjunction with the continued competitive advantages of low-cost energy, central location, and diverse transport, not only stabilized Louisville's manufacturing sector but allowed it to grow slightly during the 1990s. An increase of about 6,000 jobs in the transportation-equipment sector, including two major investments by Ford in its plants, offset continued losses elsewhere.

Although overall manufacturing employment has since rejoined the continuing national decline, Louisville has held onto its share of the nation's manufacturing jobs, and the sector ranked as the most substantial in the Southeast in 2007, according to the annual survey by Manufacturers' News, Inc. Its anchors remained the two Ford plants (about 7,000 workers in 2007), GE Appliance Park (5,200 workers), and the suppliers they support, as well as printing, metals, and chemical producers.

"We've never stopped trying to attract manufacturing, but the strength of Louisville is diversified," Mayor Abramson said. "Louisville has few peaks and troughs: We made a conscious decision in the mid-1980s never to allow any one sector or industry to control our economy, as manufacturing had in the past."

Health Enterprises

Louisville has a long tradition as a medical center, and the combination of its established providers, its large and growing cluster of health-service enterprises, and its recent but vigorous entry into life-sciences research have made health-related enterprises one of the area's stronger and most promising economic pillars. During the 1990s, new entries emerged at a brisk pace, and the sector's employment and payroll, which account for about 10 percent of the region's total, doubled.

Louisville's leading medical institutions and health-care providers are concentrated in the expansive, and expanding, medical center created in the 1950s and 1960s adjacent to the central business district. The medical center encompasses five acute-care hospitals, the University of Louisville Schools of Medicine, Dentistry and Nursing, and various institutes, associations, and physicians' offices. It has been the site of some notable clinical achievements, including the world's first hand transplant in 1999 and, two years later, the first implantation of the AbioCor replacement heart.

Two of Louisville's three Fortune 500 companies are health-related enterprises: Humana, Inc., the former hospital company that transformed itself into one of the nation's largest health-benefits companies; and Kindred Healthcare, one of the largest operators of long-term acute care hospitals and nursing and rehabilitation centers. (The third Fortune 500 company is fast-food giant YUM! Brands, the parent of Kentucky Fried Chicken, Taco Bell, Pizza Hut, and other brands.)

Humana, the older and larger of the two, has had a profound impact on nearly every aspect of Louisville's recent culture and economy, both as a business and a civic force. Its new, architecturally significant, post-modern headquarters was crucial both to the physical revival of Louisville's downtown riverfront in the 1980s and to the psychological recovery from seemingly relentless economic loss. Humana provided a model of entrepreneurial vigor and success when few other models were visible on the Louisville landscape.

Kindred Healthcare is the result of that same spirit. Its precursor, Vencor, grew from operating a single hospital in 1985 to achieving Fortune 500 status just 12 years later. After bankruptcy reorganization in 1999, precipitated by Medicare reimbursement reductions, Kindred and Ventas, the health care REIT, emerged as its successors.

Several other significant companies also either got their start or grew substantially during the late 1980s and 1990s, including SHPS, a 2,400-employee provider of benefit-management services founded in 1997; Atria Senior Living, which became one of the nation's largest providers of retirement and assisted-living services after being spun off from Vencor in 1996; and Almost Family, a multistate provider of in-home nursing services that went public in 1991. More than 40 of Louisville's health services firms can be traced directly to the Humana and Kindred taproots.[10]

This growth was augmented in the late 1990s by the arrival of several accomplished biomedical investigators, new research facilities, and biotech start-ups. All were the result of an ambitious effort to add scientifically and commercially successful life-sciences research to the city's health-care base. The effort, bringing together state, local, and private investments, included a life-science incubator program, a biomedical park, expanded venture capital, and, most significantly, substantial growth in the University of Louisville's funding for research.

Downtown Revival

The fourth major accomplishment of the 1990s was the long-sought revival of Louisville's historic Main Street corridor along the riverfront. Accelerating public and private investments totaling $1 billion created a virtuous cycle that continues today in the form of extensive residential, commercial, entertainment, and tourism development.

The decline of Louisville's expansive downtown had never reached the depths that some cities experienced, thanks to a long series of interventions. These included a 1950s bond issue for development of the medical and governmental centers, a 1960s riverfront hotel and public-plaza project, a 1970s state convention center and hotel project, and, throughout that period, investments in office towers by the city's then locally owned financial institutions.

Nevertheless, the decline was prolonged and severe, and in the 1970s, the central business district was a depressing physical representation of the community's deeper economic and social woes. In that decade, the opening of a long-anticipated pedestrian mall failed to forestall the near total collapse of the retail core, and the deserted streets and vacant storefronts compounded the problems of a faltering hospitality industry.

That industry has been central to Louisville's identity and economy from its earliest days. In fact, because of Louisville's location, relatively low costs, historic attractions, and world-class trade-show facilities at the outlying Kentucky Fair and Exposition Center, the city has long been one of the nation's top venues for national trade shows and regional conventions. Even in today's fiercely competitive market, tourism remains Louisville's leading service industry, with about 26,000 workers and 880,000 convention visitors a year.

But that economic pillar, too, was endangered during the dark days of decline. The celebrated Brown Hotel, located at an intersection that just a few years earlier had been called the "magic corner," abruptly closed in 1970, and, five years later, the equally historic Seelbach Hotel shut down. (Both were eventually restored and successfully reopened.)

The seeds for recovery were sowed during the mid-1980s along a short stretch of Main Street, and the corporate, civic, and philanthropic actions of Humana were as central to that recovery as the company's business activities were to the rise of its health services sector. In 1983, the Kentucky Center for the performing arts, financed by a unique public and private partnership and championed by Humana cofounder Wendell Cherry, among others, opened adjacent to a decade-old public plaza overlooking the Ohio River. Two years later, directly across Main Street, Humana moved into its internationally acclaimed post-modern headquarters, designed by architect Michael Graves. And two years after that, thanks in part to the donation and promised renovation of two riverfront buildings by Humana co-founder David Jones, Sr., the city won away from Kansas City the 500-employee headquarters of the new Presbyterian Church (U.S.A.).

This competitive victory, coming concurrently with the UPS decision to locate its hub at the airport, represented a major psychological turning point in two ways. Most tangibly, it converted into a gain what had seemed an irreplaceable loss; the buildings Jones donated were part of the sprawling complex of the nearly defunct hardware giant Belknap, Inc. More important, as Mayor Abramson recalled, “It was the first time, in terms of a community-wide understanding of a competitive environment, that we had won. It was a new day. We had turned the corner.”

Even more influential was the creation in 1986 of the Waterfront Development Corp., a unique public-private partnership established by Mayor Abramson, philanthropists (including Jones), and the state of Kentucky. During the following decades, this entity raised $94 million in private and public money, assembled 85 acres of industrial property, including scrap-metal yards and railroad rights-of-way, and converted them into a spectacular, award-winning Waterfront Park that today draws 1.5 million visitors annually.

This project ignited a burst of surrounding activity and development that arguably has done more than any other single investment to revive downtown life and redefine Louisville's physical profile.[11] Concurrently, the city's downtown development agency revised its master plan to focus on generating street life along the Main Street/riverfront corridor, and the visitors and convention bureau also ramped up its efforts to create a more competitive urban experience and higher-quality facilities.[12]

The 1990s thus featured not only the opening of Waterfront Park's nationally acclaimed first phase, but also the nearby development of the popular Louisville Slugger Factory and Museum, an equally popular 13,000-seat minor league baseball park appropriately named Slugger Field, and an expanded state convention center. Subsequent developments incubated during that period included a first-class convention hotel, one of the Cordish Co.'s signature downtown entertainment complexes called Fourth Street Live!, an internationally significant history and arms museum, and the Muhammad Ali Center, a combination museum documenting the life and times of Louisville's highest-profile native son and a center advancing his interest in conflict resolution and peace studies. The next major addition is to be a multi-use sports arena scheduled for completion in 2010 on the downtown riverfront, providing a new home for the passionately followed University of Louisville Cardinals basketball team.

In addition, the cast-iron district along West Main Street has continued to evolve as a cultural, arts, and museum district, including the opening of a new boutique hotel that features contemporary art exhibits and performance space. Throughout downtown, more than 4,000 loft, apartment, and condominium units either have been or will soon be completed in areas where only a few years ago the prospect for a viable market for residential living was dim.

Because of the constraints on local public financing options, the vast bulk of these projects required complex public-private collaborations and the coordination of public investments and incentives among multiple local and state agencies. The arena project, for instance, relies on a large tax-increment financing district specifically tailored to make it happen and approved by the legislature.

The downtown revival, along with progressive policies such as early passage of a gay-rights ordinance and a comprehensive smoking ban, is a source of great pride in and hope for city's appeal to professional enterprises and the creative class. In addition, new vitality and sophistication have significantly enhanced the city's tourism prospects. A 2006 marketing study by Hunden Strategic Partners concluded that, although the downtown still falls short of the constant activity Louisville's strongest competitors offer, it is "finally beginning to gel into a cohesive destination" and is on track to "close the gap with its competitors and become a strong player as a Midwestern destination."[13]

B. Civic Restructuring

To mount these and other responses, Louisville simultaneously confronted a second major challenge: overcoming its long-standing civic weaknesses. The community's deep social animosities, its real and perceived inequities, its badly fragmented governments, its rival visions of the economic future, and its political isolation in a rural-dominated state all conspired to undermine leaders' ability to take decisive action, much less pursue a sustained course.

Photo courtesy of Waterfront Development Corp.

Louisville needed to redirect the energies it traditionally devoted to these zero-sum feuds into collaborative, constructive progress toward greater competitiveness, and the losses of the 1970s and 1980s created the necessary sense of urgency to begin the shift. A good example of the deep attitudinal change that occurred was the extensive research and planning process that business groups and local government jointly sponsored in the early 1990s to chart a regional economic development strategy. The scope of the Regional Economic Development Strategy was much broader, its participants more diverse, and its vision more comprehensive and inclusive than the usual exercise in calling for more business-friendly tax, regulatory, and labor policies. The recommendations, based on extensive comparisons with other cities, ranged far and wide, from more sophisticated land-use planning to enhanced higher education, and included specific attention to such typically overlooked areas as minority business development and the potential for redeveloping inner-city assets.

During the decade of the 1990s, the result of this broader, coalition-building approach was a wholesale restructuring of civic life and the creation of a more cohesive, unified, and forward-looking community.

Metropolitan Government

As early as the 1950s, it was clear to Louisville's civic leaders that surging suburban growth was outstripping the community's governmental capacities. Alarmed by the likely financial and political consequences, they offered a proposal in 1956 to consolidate Louisville and Jefferson County government. But the voters were already firmly in the grip of powerful class, race, and regional animosities, and, after a venomous campaign, they defeated it.

In contrast, three of Louisville's surrounding rivals, Indianapolis, Nashville, and Lexington, embraced consolidated metropolitan government, and the better fortunes they subsequently experienced were an ongoing source of envy and frustration to Louisville's civic leaders. As the community reeled from the job losses, desegregation battles, and demographic fragmentation of the 1970s, the civic elite tried twice in the early 1980s to convince the voters of consolidation's virtues, and twice they failed.

After those defeats, the two highly popular chief executives elected in 1985, Louisville Mayor Abramson and Jefferson County Judge/Executive Harvey Sloane, who had previously served as mayor, defused the fractious dynamic by negotiating a 12-year, city-county compact. It established the sharing of revenues from new occupational taxes, thus emphasizing the mutual benefits to be had from joint economic development. It also imposed a freeze on annexations by Louisville and other smaller cities, of which more than 90 already existed, and on incorporations of new cities. These steps eliminated the worst of the constant jurisdictional battles, but even so, nearly every proposal for significant public investment or policy innovation had to withstand brutalizing gauntlets of city-suburban political conflict and bureaucratic rivalry.

For civic leaders, streamlined government capable of producing a clear leader, a coherent agenda, and timely improvements remained the top priority. Finally, in 2000, that vision prevailed by a margin of 54 to 46 percent after a "Unity" campaign. Several factors contributed to that watershed event: the greater attention that had been paid to neglected areas; the prospect that the alternative would be complete fragmentation into have and have-not municipalities; the greater sense of community identity generated by the downtown revival and the economic accomplishments; the vigorous, bipartisan support by trusted conservative and liberal political leaders; and widespread disenchantment with incumbent legislators. Even more important, though, was the sense of urgency arising from Louisville's continued decline compared with its regional rivals—the sports successes and downtown vitality of Indianapolis to the north, the national renown and growing corporate headquarters of Nashville to the south, and, in particular, the rise of nearby Lexington, which, thanks to its consolidated population, was on the verge of becoming Kentucky's largest incorporated place.

Aside from operational and service improvements, the creation of Louisville Metro has quickened the pace of decisionmaking, conflict resolution, and priority setting. The results have been speedier action even on highly contentious issues, greater coherence in urban-suburban policies, and far more effective collaboration with both private and other government partners. Tangible effects emerge every year, including the local-state agreement for building the new downtown arena and the ambitious public-private 21st Century Parks initiative to ring the full county with parks and greenways that will be the equivalent of the 19th century gems that Frederick Law Olmsted laid out.

Economic Development Rationalization

Louisville's responses to its losses were anything but the smooth execution of a coherent game plan. In fact, all of the 1980s and most of the 1990s was a period of serial improvisation amid ongoing dispute. There were disputes over what had happened and who was responsible, over what should be done and what should take precedence, over who should do what and with whose money, and even over what was possible.

It was also a period of great learning. The successes and disappointments of the business attraction effort clarified the city's enduring strengths and revealed the unsuspected extent of its weaknesses. Increasingly deep and more sharply focused studies added clear and convincing context. And all the scrambling schooled public and private sector leaders in the virtues and methods of partnership. Finally in 1997, it culminated in a fundamental reorganization of economic development.

First, a two-year "visioning process," building on the results of the Regional Economic Development Strategy, produced a consensus strategic plan for moving forward. That process brought together the community's top corporate, business, civic, institutional, and political leaders amid a renewed sense of urgency over the city's lack of new-economy competitiveness. Among the chief components of the plan were preservation and enhancement of established strengths, including manufacturing, tourism, and agribusiness; niche strategies for climbing the value chain in the global logistics and health/biomedical sectors; and an all-out effort to stimulate, capitalize, and offer ongoing support to entrepreneurship.

Second, all the key public and private players agreed to locate full responsibility for pursuing that plan in a single, hybrid, and unusually governed economic development organization, Greater Louisville, Inc.—the Metro Chamber of Commerce (GLI). Established in 1997, GLI pulled under one public-private roof all the community's business attraction, retention, and expansion efforts; the outreach programs previously operated by local governments; minority-business development; community marketing; and the chamber's traditional member services and public advocacy. GLI, as it name suggests, also assumed the lead role in fostering regional cooperation and forging regional alliances.

Land-Use Planning

Paralleling the evolution in the 1990s of a new government consensus was a new consensus about the rules for guiding growth and development. A broad-based process of study and negotiation originally planned for two years ended up taking seven contentious ones, but finally, also in 2000, the several governments of Jefferson County adopted a fundamentally new approach to land-use planning. Named "Cornerstone 2020," its ambitious aim was to counteract sprawl by ensuring more compact, mixed-use, better-designed and transportation-smart development for the denser urban community to come. Its essence was to rely on guidelines for mixed-use "form districts," such as "suburban marketplace" and "urban village," rather than on the single-use zones that had produced the normal inefficient patterns of leapfrogging and checker-board development.

The plan represented a new and very hard-won political bargain. Under it, developers were assured of greater certainty, speed of approval, and more openness to flexible, innovative design. In return, residents were assured that much greater attention to issues of compatibility, livability, design and the interrelationships among uses would be required from the outset.

Inner-City Development

Louisville's reassessment of its assets and liabilities had to take account of its economically marginalized and overwhelmingly black inner-city neighborhoods, particularly the West End that stretches west from the central business district to the banks of the Ohio and south to the old city limits. These older residential and industrial areas sustained significant disinvestment, white flight, and middle-class abandonment precipitated by urban renewal and the conflicts of the civil rights era. The subsequent period of deindustrialization deepened the social isolation and economic distress, as long established manufacturing plants closed and lower-skill jobs disappeared.

Several of the community's civic and business leaders had long recognized the compelling social, political, and economic imperatives to restore opportunity and stability to the area's residents. But it was the 1990s urban agenda of the Clinton administration that provided the framework for making a comprehensive start. The city administration put together a strongly competitive bid to become one of the nation's Empowerment Zones, and, when that bid fell just short, it proceeded to implement as much as possible of the strategy on an ad hoc basis. That effort opened a new era of redevelopment and revitalization, including public-private housing ventures, the establishment of the Louisville Community Development Bank, the creation of an economic development strategy based on analysis by the Initiative for a Competitive Inner City, and a separate office in GLI dedicated to that mission.

Photo by Louis J. Moseson for the Louisville Convention and Visitors Bureau

The most visible accomplishment was the nationally acclaimed, $200 million Park DuValle Revitalization, which replaced the worst of the city's public housing projects with a striking, mixed-income, New Urbanist neighborhood of 1,200 homes that immediately became a market and public policy success. On the basis of this accomplishment, the city applied for and won a second federal low-income housing HOPE VI grant for a similar project on the east side of downtown called Liberty Green. Now nearing completion of its first phase, it is similarly transforming a distressed six-block area between the revitalizing Main Street corridor and the expanding Louisville Medical Center.

Regionalism

From Louisville's earliest days, when it loaded rural Kentucky's agricultural products onto steamboats built across the river at Indiana boatyards, its economy has been a regional one. The jurisdictional participants, however, have tended to act more like crabs in a barrel than partners for prosperity. Throughout the 1980s and 1990s, with the business community taking the lead and with the rippling impact of UPS operations underscoring the point, Louisville worked to transform those historic regional rivalries into productive regional partnerships.

One effort has been directed toward the southern Indiana communities immediately across the Ohio River, where one-fifth of the metropolitan population lives. Another has been directed to Kentucky's two other major urban areas to the east, Lexington (metropolitan area population of 475,000) and the six northern Kentucky counties (370,715) contained in the Cincinnati metropolitan area.

In each case, despite clear economic and political logic, the concept of partnership has been elusive. Well into this decade, Indiana towns, which have marketed themselves as "the Sunny Side of Louisville," continued to offer state and local incentives to entice Louisville businesses to switch sides, and rejected as an intrusion a proposal by the municipally owned Louisville Water Co. to extend service there. On the Kentucky side, otherwise sophisticated citizens and state legislators argued as recently as 2006 against the construction of a new bridge across the Ohio River on the grounds that the bulk of the direct economic benefits would occur in undeveloped portions of southern Indiana.

However, spurred on precisely because of the prospect for such joint benefits, leaders on both sides of the river spent the 1990s rediscovering their common interests and forging better bonds. One impetus was the U.S. Army's transfer to a local authority of 10,650 acres of land that made up the old Indiana Army Ammunition Plant. Already well served by roads and expressways and located less than 20 miles from the Louisville airport, the land offers a highly unusual opportunity for business and industrial use of a huge tract in the heart of a major metropolitan area.

The even greater impetus, however, was the necessity of bi-state cooperation to provide more options for cross-river traffic, which the region's logistics-intensive but heavily congested expressway system badly needs. That traffic is limited to two 45-year-old Interstate bridges, both of which enter the urban core within a span of five miles and one of which depends on a dysfunctional "spaghetti junction" of expressways. A bitterly contentious process of research and debate throughout the 1990s culminated in a massively expensive plan to build a new suburban bridge and to fix the downtown interchange in conjunction with a second I-65 span.

That process also produced such heightened awareness of shared interests that a multi-county Regional Leadership Coalition was established in 2001. Its first priority was to push the bridge-building plan to completion. Subsequently, three of southern Indiana's economic development organizations combined into One Southern Indiana, and, in the spring of 2007, the heads of that group and GLI met on the oldest bridge across the river to announce a "commitment to regional economic growth for the Louisville, KY-Indiana Economic Area."

Within Kentucky, the area formed by Louisville, Lexington, and Cincinnati's Kentucky suburbs, each within 100 miles of each other, has long been called the "Golden Triangle" in recognition of its economic importance. Indeed, within it are located more than one-third of Kentucky's residents, roughly half of its manufacturing base, three of its four auto assembly plants, two major airports, its two research universities, and the headquarters of eight Fortune 500 companies, plus Toyota's North American headquarters.

From their earliest days, however, the three urban areas have been fierce economic and political competitors, and only recently has the Golden Triangle begun to be more than a geographic abstraction. The construction of Toyota's Camry plant just north of Lexington, the transformation of northern Kentucky from a series of bedroom communities to a thriving business center and, perhaps most significantly, the implementation of Kentucky's higher education reforms and new economy initiatives have underscored the urban areas' common agenda and provoked greater interchange.

The most visible substantive result was the joint sponsorship by the three areas of a forceful 2004 economic analysis that documented Kentucky's transformation into a predominantly urban state (if not yet in attitude or image) and that made the case for modernizing the fiscal policies that disadvantage urban areas.[14] The most visible symbolic result was one of Lexington's iconic business and athletics figures becoming the leader of the drive to build Louisville's new arena.

C. Entering the New Economy

The third economic challenge Louisville faced in the 20th century's closing years was the most daunting to comprehend and confront. The community had to accept that, although the many economic, civic, and social gains of the late 1980s and 1990s had strengthened it, they still were not enough to secure entry into the high-skill, high-wage, and high-growth global knowledge economy. This was a hard lesson learned the hard way.

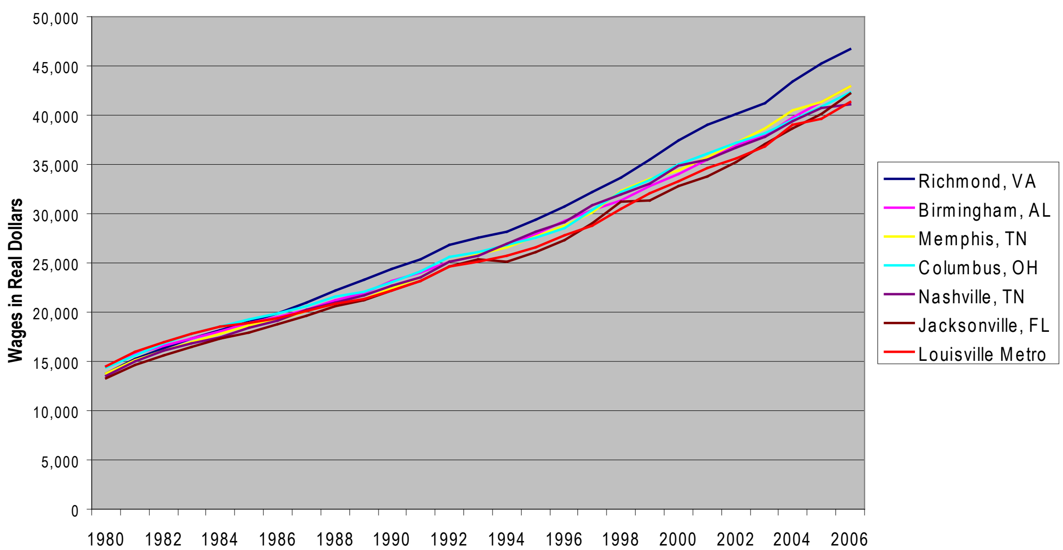
As early as 1982, economist and small-business guru David Birch had warned civic leaders that new business activity was increasingly located near "centers of brainpower....and Kentucky and Louisville don't look very good in that respect." In fact, they looked terrible. Kentucky's labor force was then the nation's least educated.

Birch's warning was confirmed by the uneven results of Louisville's subsequent business attraction efforts, but it was not until 1996 when business, education, civic, and elected leaders gathered to hear the conclusions of the economic development consultant they had hired that their eyes were opened fully. Everyone in the audience remembers the moment vividly.

Never, M. Ross Boyle of Growth Strategies Organization told them, had he encountered a wider mismatch between the aspirations of a city's leadership and the reality of its economic foundation. That reality was that the one-time Gateway to the South was not competitive in any of the new-economy sectors on which other cities were building their prosperity. Louisville could continue to compete well for low- to medium-wage jobs in traditional areas of strength and remain "a nice, average city," but anything more would require smartly targeted, expensive, and long-term changes, and even those might not prove sufficient.[15]

Louisville's economy had become sharply divided. As University of Louisville economist Coomes later summarized the split, Louisville excelled at assembling and moving but not at creating or owning. Even in the economy's strongest segments, significant gaps remained. Among Louisville's many health enterprises, for instance, the number of research-based, life-science firms was negligible. The city's major corporations were technologically sophisticated, but relatively few businesses had emerged to develop or produce either hardware or software. The community's finance, insurance, and real estate sectors, while numerically substantial, were skewed to lower-wage, back office and customer services; employment and pay levels in management, professional services, and the information industry remained below national averages and below the levels of its peer cities. Even after the

Figure 3. Average Annual Wages Selected Peer Comparison (Core Counties), 1980 to 2006



Source: U.S. Census and American Community Survey
Kentucky Population Research, University of Louisville for The Greater Louisville Project
Note: Louisville data impacted by largest employer (UPS) reliance on part-time positions

successes of the 1980s and 1990s, when the Progressive Policy Institute ranked 50 metro areas on its "New Economy Index" in 2001, Louisville ranked 46th.[16]

Chief among the causes were decades of chronically low levels of education, long-standing weaknesses in university and research infrastructure, and the anemic levels of entrepreneurial innovation and financial risk-taking. Boyle's report galvanized Louisville's civic, business, and educational elites to begin confronting those liabilities.

They set a goal of turning their "nice, average city" into an economic "hot spot," and the visioning process that followed is what prompted the 1997 creation of GLI and the strategies it has followed since. GLI's first president was a young, highly successful high-tech entrepreneur, Doug Cobb, and among its earliest accomplishments was the rapid acceleration of the entrepreneurship agenda that had been started earlier in the decade. Less than five years later, Louisville was among the top 10 cities in Birch's final *Cognetics* rankings of entrepreneurial hot spots, with substantial growth in venture capital, start-up supports, and in *Inc.*'s 500 fast-growth companies.

The chances for success with these new strategies were vastly improved by a concurrent revolution in Kentucky's key education and economic policies. In Kentucky, the most crucial aspects of educational, economic, and fiscal policy are controlled by the state, and it has traditionally been controlled by rural and small-town interests. The results have been broadly detrimental to both urban and intellectual development—and in this era of urbanization and knowledge, even more harmful than in the past to Kentucky's overall prosperity. As University of Kentucky economists Kenneth Sanford and Kenneth Troske lamented in a 2007 paper, "Kentucky has been one of the poorest and least productive states in the country for as long as we have been recording these statistics."[17]

Throughout the second half of the 20th century, Kentucky consistently ranked at or near the bottom in educational attainment and near the top in concentrations of poverty. Its economic superlatives consisted of the large quantities of tobacco, coal, and marijuana it produced and the large number of family farms. For decades, its politics and economic policies revolved around protecting those tobacco, horse, and coal-mining industries, and recruiting to impoverished rural areas low-skill, low-wage factories. Louisville's industrial economy was largely viewed as a necessary and self-sustaining evil—a source of wages when economic circumstances forced poorly educated workers to leave home, and a source of large state subsidies for the rural roads, schools, and overloaded safety nets they left behind.

Between 1990 and 2000, Kentucky state government, under great duress and over fierce political resistance, took three dramatic steps toward replacing this outmoded paradigm with a "new economy" agenda of its own. First, in 1990, after the state Supreme Court declared Kentucky's financially inequitable and educationally abysmal system of public schools unconstitutional, the General Assembly adopted and financed one of the nation's earliest, most comprehensive, and quickly effective programs of school reform and accountability. Since then, achievement levels have risen from the bottom to the middle tier.

Second, in 1997, it adopted an equally sweeping realignment of postsecondary education. It established an independent system of unified community and technical colleges, mandated the development of significant research distinction at its two major universities and funded it with a highly consequential "Bucks for Brains" program (see inset), and committed itself to supporting and achieving substantial growth in post-secondary education attainment.

Third, in 2000, the state adopted the Kentucky Innovation Act. It created an Office for the New Economy, established funds to support knowledge-based business start-ups, research and development and commercialization, and organized results-minded collaboration among higher education, economic development, and science and technology agencies.

Not only did these steps, and others that followed, represent a quantum leap in Kentucky's economic thinking, but they also brought the state's official, if not yet culturally dominant, priorities into close alignment with Louisville's new economic agenda.

Most immediately and tangibly, the Bucks for Brains initiative led to quick and substantial gains in the University of Louisville's research capacities. Until 1970, the university had been inadequately funded, consisting of well-established professional schools and a socially valuable but academically weak undergraduate program that primarily served commuting, part-time, and nontraditional students. Kentucky had rescued the university from fiscal crisis in 1970, and, once it was a part of the state system, the elevation of its quality and, especially, its economic contribution became a steadily higher civic priority. The state's 1997 reforms made this uplift a priority as well.

The legislation maintained the flagship status of the University of Kentucky in Lexington, but it also mandated University of Louisville to become "a premiere nationally recognized metropolitan research university" and designated it to receive one-third of the proceeds from the new Research Challenge Trust Fund. This fund, the unprecedented "Bucks for Brains" program, was to be used to jump-start university research by matching private donations dollar for dollar for the recruitment of top-ranked scientists and scholars.

Louisville's civic community seized the day, and in the first eight years, the university's combined receipts from public funds and private donors totaled more than $136 million. The number of endowed chairs increased from 25 to more than 60, federally funded research grew by more than $96 million, and the school's rank among recipients of research funding from the National Institutes of Health jumped from 204th to 103rd. In addition, the university constructed more than $400 million in new research facilities at the Louisville Medical Center.

The university targeted this expansion of research power at the three priority areas in the new economy agenda: building an economically productive biomedical and life-sciences cluster; securing leadership in logistics; and stimulating the entrepreneurship and venture capital necessary for developing those and other knowledge-based ventures. Several of the endowed chairs attracted noted and highly productive life-science researchers in cancer, cardiology, transplantation, and spinal-cord regeneration. In addition, the university's School of Business added a chair in supply-chain management and created an interdepartmental Logistics and Distribution Institute. It also added an endowed chair to its existing entrepreneurship program, which now is ranked among the nation's best.

In addition to the university's push into research, Louisville's public and private sectors began several initiatives to support knowledge-based ventures. Two new business incubation efforts focused on life science and information technology start-ups. An "e-Main" district on Main Street was created for tech ventures, and a public-private Louisville Medical Center Development Corp., later taken over by the university, was created to provide offices, infrastructure, and coordination for life-sciences and biotech ventures. A separate division of GLI, the Enterprise Corp., specialized in supporting entrepreneurs and fast-growing companies.

More broadly, the region mounted a variety of public-private and local-state initiatives during the late 1980s and 1990s to improve the skills of Louisville's workforce and to raise K-12 achievement levels. Business and civic leaders backed several initiatives by Louisville's unified public school system, including one of the earliest campaigns to equip classrooms with computers, and an expansion of preschool for low-income children.

The community's educators and business leaders played important roles in advocating Kentucky's K-12 and higher education reforms, and collaborated energetically and closely in implementing them. The gains in achievement have been steady, although incremental, including improved test scores, higher university graduation rates, and greater shares of young adults earning postsecondary degrees or certificates. As the 20th century came to an end, Louisville and the state of Kentucky had put in place the structures and many of the resources, strategies, and values necessary for preparing its institutions and people to enter the economy of knowledge that had to date largely passed them by.

V. Today and Tomorrow

The combined impact of all these efforts was clear in a recent study of America's older industrial cities by the Brookings Institution. The study identified 65 cities out of 302 nationwide that had the lowest scores on eight indicators of economic health and residential well-being. In 1990, Louisville was one of 17 cities on that list, but by 2000 had moved off.[18] The number of business establishments in Jefferson County grew by nearly 12 percent during the 1990s, for example, and wages increased nearly 37 percent.[19] At the same time, the core city's median household income grew by nearly 9 percent, while the poverty rate fell 1 percentage point.[20] Meanwhile, the share of metro residents with a college degree has continued to climb, reaching 29 percent in 2005, according to the American Community Survey.

Although the first years of the new century have reaffirmed Louisville's new strengths, they have also underscored its continued vulnerabilities. Overall, the area's economy was hurt more and recovered more slowly by the recession that opened the century than the nation at large. When growth did return, however, it picked up at a slightly faster pace than the nation's.

The hard-won stability of the manufacturing sector gave way to further losses in the early years of the this century, similar to those nationally. About 17,000 manufacturing jobs have been lost since 2000, and more reductions, in number and pay levels, are on the way. Although the two Ford plants survived the company's round of plant closings, their combined workforce has fallen from a peak of 10,300 in 2001 to 6,000 in early 2008, with at least 800 layoffs and more buyouts of older, higher-paid workers coming. Most recently, GE announced its intention to divest itself of the entire Consumer and Industrial group headquarted in Louisville.

The manufacturing decline, however, has been offset by welcome growth in the professional and business-services sectors and in health and education services, and the positive momentum of the 1990s has been sustained in the most promising areas. "We're sort of 'wing walking' between the old economy and the knowledge economy," said GLI's Joe Reagan, "but there's an emerging 'can do' attitude—people are starting to talk about *how* to do things, not whether we can do them. There's a fresh sense of possibility here."

A. Continued Recovery

Louisville is continuing its progress in a number of key areas. The UPS juggernaut has continued apace, for example, with the second $1 billion expansion in a decade scheduled for completion in 2010. Among the firms that have already established distribution facilities are biotechnology leaders Amgen and Genentech. Their presence, along with a near success in landing a mail-order pharmacy, has buttressed hopes for the emergence of an economically productive alliance between the community's logistics and life-sciences sectors in the coming era of personalized, time-sensitive drug design.

The downtown resurgence has likewise continued, with quickening announcements of new private investments in hotels, entertainment venues, residences, and multi-use developments, as well preparatory work for the new downtown arena. In older, nearby neighborhoods, the first residents began moving into new homes in the second Hope VI redevelopment project, to the east of downtown. A few months later, to the west, private developers began work on transforming the abandoned, 23-acre Philip Morris cigarette plant into a commercial, residential, and business center. A lively corridor of visual and performing arts has taken shape, and the city is hosting an annual "Idea Festival" that draws creative-class audiences to three days of presentations by innovative thinkers from a variety of science, technology, business, and arts fields. Louisville also was chosen to host the 2008 Ryder Cup golf tournament.

Louisville's corporate base also has shown strength. The painful loss of Brown and Williamson headquarters in 2004 was partially offset by the arrival of PharMerica in 2007. Humana has been a big winner in the rollout of the Medicare prescription drug plan, and the strong performance in global markets of both Yum! Brands and Brown-Forman earned them inclusion in a UBS Investment Research list of nine "Global Moguls." Equally important, the emphasis on entrepreneurship has produced a steady stream of successes, especially among technology firms.

Research activities by University of Louisville's investigators have continued to grow in number, scale, and stature, including the creation of a Cardiovascular Innovations Institute. Buoyed by corresponding increases in patent activity, licenses and the formation of promising commercial life-sciences ventures, the university won state approval for a tax increment financing plan to drive a 20-year, $2.5 billion expansion of the medical center, which it predicts will produce 8,700 high-wage jobs and $1.2 billion in private investment. In addition, growing expertise in health informatics among public and private sector enterprises has created optimism about the prospects for a new-economy cluster in that area.

In economic development, the public-private partnership represented by GLI gained national recognition for its results, with *Site Selection* magazine naming it one of the top ten economic development groups in 2006, and the American Chamber of Commerce Executives naming it “Chamber of the Year” for 2007. GLI has organized active business networks in key sectors, including health enterprises, technology, and logistics, which oversee research and collaborative efforts to further growth in their sectors. It also administers the mayor's “High Impact Program,” a public-private initiative to support the community's fast-growth "gazelle" companies. Aiming to take the economic development agenda to the next level, in 2008, in partnership with the mayor, GLI will do a major review of the 1997 *Visioning Report* that has guided its work for a decade, incorporating a sharper focus on 21st century jobs.

Of equal consequence for the long range, Louisville’s broader civic community has become more actively engaged in the drive to raise Louisville’s competitive profile. In 2002, on the eve of city-county consolidation, a consortium of philanthropic foundations created The Greater Louisville Project and commissioned the Brookings Institution Metropolitan Policy Program to assess the condition of and challenges facing the newly unified community.

The result, “Beyond Merger: A Competitive Vision for the Regional City of Louisville,” became the basis for ongoing research, goal-setting, and benchmarking, as well as the stimulus for the emergence of boundary-crossing civic collaborations. Its five broad goals—improving educational attainment at all levels, building on assets to expand the economy, fostering quality neighborhoods, increasing support for working families, and ensuring balanced growth across the region—have been widely embraced as a framework for uniting government, private, and nonprofit entities in a sustained drive to move Louisville into the top tier of American cities.

One immediate and tangible result was the creation of a GLI-led and business-backed reading initiative in the public schools. It has generated $8 million in donations, attracted 8,000 volunteers, and contributed to a significant reduction in the number of children reading below grade level, and will continue until “Every1Reads,” as the initiative is called. Building on that success, the GE Foundation financed a $25 million revision in math and science instruction with the goal of increasing college enrollment rates. Louisville business leaders now are organizing a new leadership effort to support further education improvements, and a bi-state collaboration of postsecondary institutions is aiming to boost graduation and retention rates.

Local foundations have used The Greater Louisville Project’s work to guide grant-making, and both the University of Louisville and Louisville Metro government have used it in developing strategic plans. The project's most recent thrust generated a community-wide focus on key goals identified as “Deep Drivers of Change”: doubling by 2010 the projected growth in the number of young adults with a bachelor’s degree, and comparable increases in high-school graduation, associate degrees, and technical certificates; accelerating projected growth in professional and technical jobs; and investing in the urban core to strengthen Louisville Metro and balance growth across the region.[21]

Pride of progress and hope for better have now replaced the anger and despair that dominated the civic psyche a quarter century ago. It is clear to all that the aggressive actions that Louisville and the state of Kentucky took to strengthen their economic base have produced measurable results—a better business climate, increased competitiveness and expanding beachheads in education, research and development, and knowledge-intensive enterprises. But the accomplishments have mainly been incremental and not yet transformational, and they constitute only a solid beginning—the basic foundations for what necessarily will be a long, come-from-behind drive.

B. Remaining Challenges

Louisville’s challenge is to accelerate the pace and enlarge the scale of the competitive progress it has begun. For instance, despite the heartening growth in the educational attainment of young adults and in the ranks of professional and technical employment, the community remains well behind several of its regional competitors. Although the region has made concerted and successful efforts to expand life-science enterprises, a 2006 study by the ANGLE Technology Group found that the sector remained comparatively small and continued to be hampered by a lack of high-risk and early-stage capital for start-ups, a lack of serial entrepreneurs, and a "thin pool" of manufacturing expertise. Despite the overriding importance of transportation infrastructure to success in logistics, the community’s traffic congestion has grown into the third worst among America’s midsized cities, according to the Texas Transportation Institute. Yet the Ohio River Bridges Project designed to fix that—and to finally and fully connect the bi-state economic region—has been mired in 14 years of planning and financing controversy and completion remains 15 years off.

Louisville’s leaders are well aware of the remaining challenges. So, too, are Kentucky’s top civic leaders, who for the most part have embraced the new-economy agenda in both its educational and knowledge creation/commercialization dimensions. But they continue to face an uphill battle in public awareness and political will.

"We are changing the conversation with Kentucky communities related to industrial development versus education attainment," a state economic development official told a Greater Louisville Project interviewer. "When community leaders come to me and say, ‘When are we going to get a factory?’ I say, ‘What’s your high school graduation rate?’ "

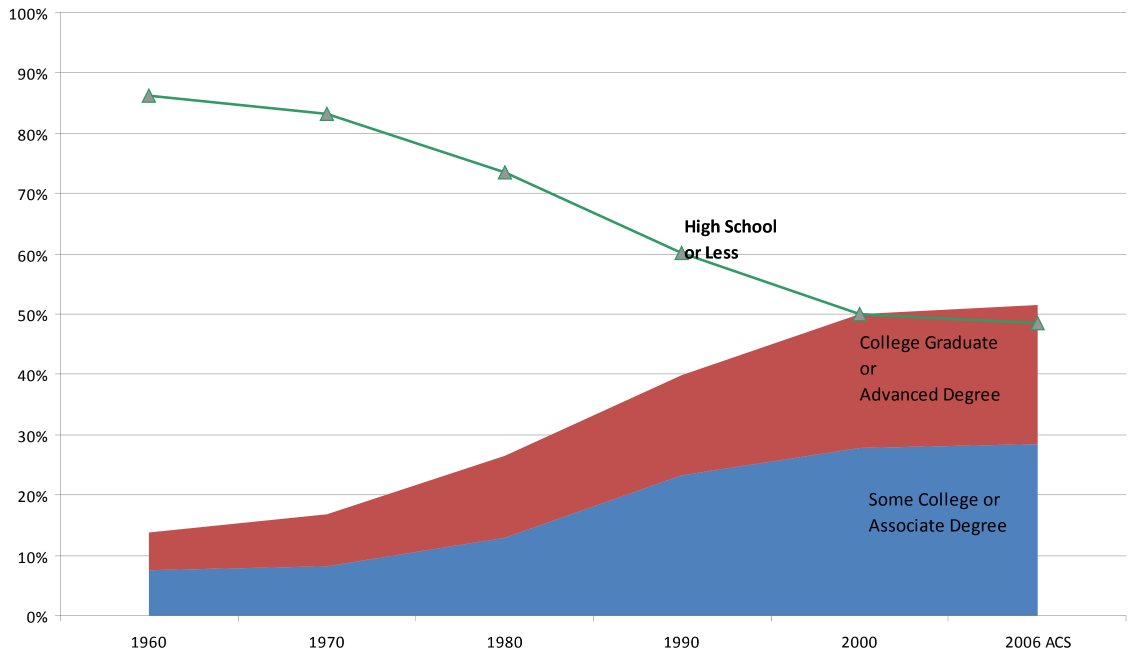
For both Louisville and Kentucky, the human capital agenda remains paramount, and each is dependent on the other for success—Louisville on Kentucky for the policies, priorities, and funding necessary for new-economy progress, and Kentucky on Louisville for the economic growth on which the rest of Kentucky’s fortunes still disproportionately depend.

Louisville has begun to bring sharper focus and more collaborative effort to that agenda. The mayor has announced major public-private initiatives to encourage the more than a hundred thousand adults in the metro area who did not complete their postsecondary training to return and do so. Higher education institutions are working together on how best to improve their low retention and graduation rates. The public schools are aggressively introducing new approaches in low-performing schools, including an experiment in smaller class sizes and new science and math curricula in all schools. Business leaders, in addition to continuing the productive reading initiative, are preparing to assume a far more assertive role in promoting and supporting education, and the national Business-Higher Education

Forum has chosen Louisville as one of three sites for its College Readiness Initiative.

At the state level, similar initiatives are underway, but the education momentum of the 1990s has dissipated amid financial strains, ideological disputes, and regional rivalries. Regaining it must be Kentucky's highest priority. Toward that end, the state Chamber of Commerce financed an analysis of postsecondary education performance in the decade since the 1997 reforms, and highlighted the pressing need for, among other things, improved access, greater productivity, and closer strategic alignment with economic development goals and activities.

Figure 4. Educational Attainment Among Adults 25 Years and Older Louisville MSA, 1960 to 2006



Source: U.S. Census Bureau and 2006 American Community Survey, Analysis by Kentucky Population Research, University of Louisville for The Greater Louisville Project

The human capital agenda also must focus on turning brain drain into brain gain. Louisville has launched a national "Possibility City" branding campaign to counter its image as a sleepy, semi-rural throwback. It has thrown a series of parties in the nation's largest cities to acquaint former residents with how much has changed since they left. And it is well on its way toward developing a competitive mix of cultural, arts, and entertainment amenities to attract and retain young, creative-class workers.

The real key, however, will be the expansion of the entrepreneurial culture and the research and development infrastructure on which high-value, knowledge-intensive enterprises, and their high-skilled workers, thrive. Again, Louisville's energetic efforts must be matched by Kentucky's continued commitment to its new-economy initiatives. The state has been admirably aggressive in several regards; for instance, in mounting a nationally acclaimed effort to deploy broadband throughout the commonwealth. Kentucky was also the first state to offer to match two types of federal grants for high-tech companies, the Phase 1 and 2 Small Business Innovation Research and Small Business Technology Transfer Research grants. The overriding challenge, however, will be to sustain the growth in the research and commercialization capacities of its major universities, on which rests the future competitiveness of its two major urban areas, Louisville and Lexington.

That competitiveness would also benefit from another major shift in state policy: increasing local capacity for productive investment. In too many ways, Kentucky's fiscal policies remain more suited to its rural heritage than to its urban present and global future. The combination of Kentucky's agrarian values and its widespread rural poverty gave rise to a highly redistributionist state government, which today levies one of the nation's highest state tax burdens but which still spends the proceeds according to habits and formulas that favor the small and rural over the large and urban. As a result, the state redistributes to rural areas 40 cents of every dollar it collects from Louisville, or about $1 billion a year.

In addition, the state has severely constrained the ability of Louisville and other local jurisdictions to fend for themselves. For decades, it has imposed a cap on the growth of municipal and school property tax revenues, and the state constitution prohibits local-option sales taxes, the most politically palatable source of revenue for local bond issues and capital improvements. Thus, despite a relatively high overall tax burden, Louisville lacks commensurate capacity for, or evidence of, public investment.

Louisville's leaders rightly take pride in the elaborate public-private partnerships they have devised to overcome these limitations, but those successes come more slowly, more piecemeal, and on a smaller scale than is necessary to remain competitive. State authorities have recently become more willing to provide ad hoc and indirect state support for Louisville projects, through such mechanisms as tax increment financing and tax credits for tourism and historic preservation projects. But Louisville still lacks the full set of tools for self-improvement and the reliably urban-friendly state partnership that its most successful regional competitors already enjoy.

More generally, the rapid changes in the domestic and global economies require equally rapid creation of close, strategic collaboration among Kentucky's historically competitive communities, regions, and educational institutions. In the Louisville region, a major step in this direction will be taken over the next two years. Louisville is joining with Kentucky and the nine-county Lincoln Trail Area Development District to the south to develop a coordinated economic development strategy for 26 Kentucky and Indiana counties along the I-65 corridor.

The immediate impetus is the impending arrival at Fort Knox, 35 miles to the south, of the headquarters of the U.S. Army's human resources and accessions commands. This influx of up to 4,500 highly skilled, technologically sophisticated, and primarily civilian workers will confront the region with challenges that can be met, and substantial opportunities that can be seized, only by developing new and more integrated regional resources. It is a microcosm of the larger transformational task that remains, and the concerted efforts it will require.

V. Conclusion

The continuation of large-scale changes in Louisville is evident in the new face that Louisville is presenting to the world. When visitors arrive from the north, they can still see the once unnavigable white waters of the Falls of the Ohio, where the ancient fossil beds lie exposed in the river's shallows. But now, through the canal and the McAlpine Locks that bypass those shoals, barges carry more cargo every year than moves through the Panama Canal. To the east, they can see the girders of one of the early railroad bridges, but the new approaches being built at each end will soon convert the bridge into a pedestrian walkway for uniting Kentucky and Indiana neighbors.

In the sky above the old wharf where steamboats once exchanged the goods that an expanding nation required, UPS cargo planes now make their approach to the international airport where they exchange the packages and goods on which an interconnected world depends. Below, on the same river banks long occupied by industrial warehouses, rolling mills, barge-loading operations and railroad tracks, Humana's office buildings overlook the green Waterfront Park, where the community comes together to play.

The neon "Gateway to the South" sign no longer glows, but it has been replaced, down to the west and just blocks from where slavers once conducted their shameful trade, by a new visual image of Louisville. The visage of Muhammad Ali emerges from the tiles that cover the walls of the center bearing his name. Louisville has now fully embraced this native son, who audaciously threw off the binding constraints of history, even down to the revered Southern abolitionist name he had been given, Cassius Marcelus Clay, to become a true citizen of the world. His image is a fitting symbol for the similar journey that Louisville has begun.

Kentucky's "Bucks for Brains"

The passage of the Kentucky Postsecondary Education Improvement Act of 1997 represented a quantum leap in Kentucky's efforts to equip its institutions and people for the knowledge-based economy.

Of the many fundamental changes it made, none was more immediately consequential than the endowment match program known as "Bucks for Brains." During the program's first 10 years, Kentucky committed $350 million to be matched by universities' private fundraising and to be used for strategic investments in research.

Of the total, $300 million was allocated to a Research Challenge Trust Fund for the two major research universities, with two-thirds reserved for the University of Kentucky, the commonwealth's flagship land-grant university, and one-third reserved for the University of Louisville. The bulk was invested in five priority areas: human health and development; biosciences; materials science and advanced manufacturing; information and communications technologies, and energy and environmental technologies.

The benefits to these two institutions in the first decade, according to a report by the Kentucky Council on Postsecondary Education, included:

- A 47 percent increase in annual giving.
- Increases of 146 endowed chairs, from 53 to 199, and of 207 endowed professorships, from 49 to 256.
- A threefold increase in total federal and extramural research and development expenditures, from $180.8 million to $544.1 million. Bucks for Brains faculty were responsible for 18 percent of the federal expenditures and 12 percent of the extramural expenditures.
- The rise in the University of Kentucky's rank among public universities for federal research and development expenditures from 45th to 40th and in University of Louisville's ranking from 119th to 87th.
- Steady growth in new patent applications, licenses and options, and start-up companies dependent on university-generated technology. Bucks for Brains faculty accounted for 30 percent of the patent applications and 36 percent of the start-ups.

Source: Kentucky Council on Postsecondary Education, "Ten-Year Anniversary Assessment of Kentucky's Bucks for Brains Initiative" (2007), available at http://www.cpe.ky.gov/news/reports/cpe_reports.htm

Interviews

Unless otherwise noted, this report's account of Louisville's post–1985 history is based on material contained in the files of *The Courier-Journal* and *Louisville Times*, for which both authors worked as journalists, and on interviews with the following participants in that history:

Jerry Abramson, Louisville mayor, 1985–1998, and mayor of the consolidated city and county from 2003 to the present

Joe Reagan, president and CEO of Greater Louisville, Inc.— The Metro Chamber of Commerce

Charles Buddeke, a Louisville business executive who served at various times as the director of Louisville's office of economic development, president of the Louisville Chamber of Commerce, and leader of the Greater Louisville Economic Development Partnership

Morton Boyd, retired chairman and CEO of National City Bank of Kentucky who chaired the board of the Greater Louisville Economic Development Partnership

Brad Richardson, an economic development professional who served as the Greater Louisville Economic Development Partnership's president and CEO

Larry Hayes, who served as Secretary of the Cabinet during the term of Kentucky Governor Martha Layne Collins and as a deputy mayor of Louisville Metro and has since returned to the Office of the Governor

Crit Luallen, who served as the first staff leader for the Campaign for Greater Louisville, president of the Greater Louisville Economic Development Partnership, secretary of the cabinet in the administration of former Gov. Paul Patton, and now as Kentucky Auditor of Public Accounts

The late Joan Riehm, long-time deputy mayor both in the city of Louisville and in Louisville Metro government.

Endnotes

1 Edward Bennett is a freelance editor and former newsroom executive and editorial page editor of *The Courier-Journal*. Carolyn Gatz is an independent consultant and director of The Greater Louisville Project.

2 The MSA was expanded from 7 to 13 counties following Census 2000; throughout the rest of this report, the MSA population figures reflect the seven-county MSA, the growth and characteristics of which formed the basis of the research and decisions that shaped Louisville during the last decades of the 20th century.

3 Three single-volume works provide the basis for most of the historical material in this report: George Yater, *Two Hundred Years at the Falls of the Ohio* (Louisville: The Filson Club, 1987), which is the definitive narrative history of the city; John E. Kleber, editor, *The Encyclopedia of Louisville* (Lexington: University of Kentucky Press, 2000), which admirably fulfills the function its name implies; R. C. Riebel, *Louisville Panorama* (Louisville: Liberty National Bank and Trust Co. of Louisville, 1960), a nonscholarly but useful chronology. For a brief overview of the tortured history of race, see Scott Cummings and Michael Price "Race Relations and Public Policy in Louisville: Historical Development of an Urban Underclass," *Journal of Black Studies*, 27 (5) (1997): 615–649.

4 The fourth closed in 2000, and four years later, the last remaining vestige of the once mighty industry vanished: the 450-employee corporate headquarters of Brown & Williamson Tobacco Corp. departed after the company's merger with R. J. Reynolds.

5 Unless otherwise noted, this report's account of Louisville's post–1985 history is based on material contained in the files of *The Courier-Journal* and *Louisville Times*, for which both authors worked as journalists, and on interviews with the participants in that history, as listed in the Interviews section to this report.

6 Among the many reports by Paul Coomes and his colleagues, which are available at http://monitor.louisville.edu, are these: "Macro Performance Indicators for the Louisville Area Economy 2000," with Barry Kornstein; "Louisville's Health-Related Economy: Size, Characteristics and Growth," a report for Greater Louisville, Inc., Health Enterprises Network, 2001, with Raj Narang; "The Size, Characteristics and Performance of Technology-Intensive Industries in Louisville," a report for the Technology Network of Greater Louisville, Inc., September 2003; "Logistics and Distribution Activity in the Louisville Economy," 2003; "Kentucky's Economic Competitiveness: A Call for Modernization of the State's Fiscal Policies," a report for the Tri-County Economic Development Foundation in Northern Kentucky, Lexington Urban-County Government, and Greater Louisville, Inc., December 2004; "Current Economic Conditions, Prospects in the Louisville Area," 2006; "Manufacturing in Louisville and Its Peer Metropolitan Areas: Results from the 2002 Economic Census," February 2006; "Louisville's Economic Performance Compared to 14 Peer Metros," 2006.

7 Paul Coomes and Nan-Ting Chou, "Cyclical Patterns and Structural Changes in the Louisville Area Economy since 1990," *Regional Economic Development* (St. Louis, MO: Federal Reserve Bank of St. Louis, November 2005), and "Revised Employment Data for Louisville-Jefferson County Metro Area Show Significantly Higher Growth for 2005-06 than Previous Estimates" (St. Louis, MO: Federal Reserve Bank of St. Louis, 2007), both reports available at http://www.stlouisfed.org. In "The Louisville Labor Force," a 2003 report for KentuckianaWorks, Paul Coomes, Michael Price, Barry Kornstein, and Martye Scobee calculated that the larger, 23-county Louisville economy added on net 160,000 jobs between 1990 and 2000, "surely the greatest such growth in the area's history," with slightly more than one-half occurring in Jefferson County.

8 Regional Airport Authority of Louisville and Jefferson County, "Louisville's Airports Powering the Regional and Statewide Economy" (2006), available at www.flylouisville.com (July 2008).

9 The 2007 Kentucky General Assembly authorized $200 million in new incentives to Ford if its two Louisville

plants, both of which produce the larger vehicles now in decline, survived the company's retrenchment.)

10 The largest and latest addition is the headquarters of the new, free-standing PharMerica Corp., created in 2007 when Kindred and AmerisourceBergen spun off and combined their institutional pharmacy providers.

11 Waterfront Development Corporation, "The Impact of Louisville's Waterfront Park" (2007), available at http://www.louisvillewaterfront.com/projects/ (July 2008).

12 City of Louisville, Downtown Development Corp. and Louisville Central Area, Inc., "Louisville Downtown Development Plan" (2002), available at http://www.downtowndevelopmentcorp.org/devplan.aspx (July 2008).

13 Hunden Strategic Partners, "Arena Hotel Study, Louisville, KY" (2006).

14 Coomes, "Kentucky's Economic Competitiveness."

15 "Economic Development Strategy for the Greater Louisville Region," prepared for the Louisville Chamber of Commerce and the Greater Louisville Economic Development Partnership by Growth Strategies Organization (1996).

16 Progressive Policy Institute, *The Metropolitan New Economy Index* (April 2001), available at www.NewEconomyIndex.org (July 2008).

17 Kenneth Sanford and Kenneth Troske, "Why is Kentucky So Poor? Kentucky Annual Economic Report 2007" (Louisville: Center for Business and Economic Research, University of Kentucky, 2007). See also, Paul Coomes, "Improving Earnings Per Job: The New Economic Development Challenge in Kentucky." Kentucky Annual Economic Report 2002 (Louisville: Center for Business and Economic Research, University of Kentucky, 2002); Paul Coomes, "Kentucky Is Missing Lucrative Office Economy Growth." Kentucky Annual Economic Report 2005 (Louisville: Center for Business and Economic Research, University of Kentucky, 2005); and Mark C. Berger and Arun R. Srinivasan, "Kentucky's Employment in the New Economy." Kentucky Annual Economic Report 2001 (Louisville: Center for Business and Economic Research, University of Kentucky). Kenneth Sanford and Kenneth Troske, "Why is Kentucky So Poor?" Kentucky Annual Economic Report 2007 (Louisville: Center for Business and Economic Research, University of Kentucky, 2007).

18 Jennifer S. Vey, "Restoring Prosperity: The State Role in Revitalizing America's Older Industrial Cities" (Washington: Brookings Institution, 2007).

19 U.S. Census Bureau, *County Business Patterns 1990 and 2000* (date published).

20 U.S. Department of Housing and Urban Development, *Census 2000: State of the Cities Data Systems*, available at http://socds.huduser.org/index.html.

21 Brookings Institution Center on Urban and Metropolitan Policy, "Beyond Merger: A Competitive Vision for the Regional City of Louisville" (2002), and "Competitive City Report 2007" (Louisville: The Greater Louisville Project, 2007), are available at www.greaterlouisvilleproject.org.

Acknowledgements

The Brookings Institution thanks the Surdna Foundation, the Ford Foundation, the F. B. Heron Foundation, the Charles Stewart Mott Foundation, the Kresge Foundation for their generous support of this work, and The Greater Louisville Project for the graphics used in this report.

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