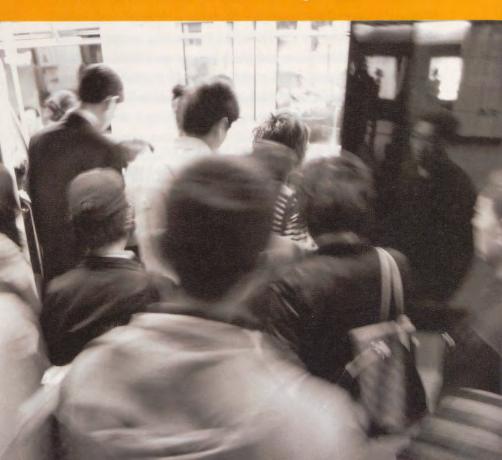
Analyzing Private Investment in the Chicago Transit Authority



The Potential for Joint Development

BY DANIELLE YU-CHEN DAI

Introduction

Transportation is the lifeblood of an urbanized society, and the health and welfare of an urbanized society depend on providing efficient, economical, and convenient transportation in and between urban areas.

- 49 U.S. Code 5301

Title 49, Chapter 53, of the U.S. Code addresses the need to foster the development and revitalization of public transportation systems. With more than two thirds of the American population living in urbanized areas, there is an increasing need for comprehensive, efficient, and high-quality public transit to ensure the vitality of cities. First, many Americans rely on mass transit to connect them to jobs, schools, and opportunities. In 2008, public transit ridership reached a new record with passengers taking over 10.7 billion trips. Second, transportation supports sustainability efforts. Public transit can improve air quality, reduce greenhouse gas emissions and traffic congestion, save energy, and decrease reliance

^{1.} Government Accountability Office, GAO-10-19.

on foreign oil.² Third, public transit provides economic opportunities. Every dollar communities invest in transit generates approximately four dollars in economic returns.³ That public support for mass transit is at its highest in eight years indicates the continued need for quality public transportation.⁴

Unfortunately, given the limited capacity of the public sector to meet the increasing demand for transit, the nation's transit systems face challenges. In 2009, two rush-hour metro trains collided in Washington, DC, killing nine people, the deadliest incident on the system. In the late 2000s, the Chicago Transit Authority (CTA) increased fares, reduced services, cut bus routes, and fired employees to address million-dollar budget shortfalls. The severity of the nation's outdated transit infrastructure and the constant financial struggles of transit agencies demand our attention. Almost all transit officials, policy makers, urban planners, and citizens understand the necessity of affordable mobility and agree that the problems of public transit must be solved. Many people agree that the current system of transit funding and support, primarily through federal subsidies, state and local taxes, and rider fees, is insufficient. The question remains: How do we support and fund mass transit to ensure a comprehensive, efficient, safe, and high-quality system?

The insufficient capacity of the government to meet the increasing demand for public transportation requires a critical look at alternative and innovative strategies that support public transit. One alternative is joint development through public-private partnerships. I argue that

- 2. Federal Transit Administration, "Transit and Environmental Sustainability."
- 3. American Public Transportation Association, "Transit Facts."
- 4. Smith, Trends in National Spending Priorities, 1973-2008.
- 5. McNamara, "DC Metro accident update."
- 6. Chicago Transit Authority, "CTA President Releases 2010 Budget Recommendations," press release, October 12, 2009, http://www.transitchicago.com/news/default.aspx?Month=&Year=&Category=2&pg=2&ArticleId=2482.

fostering joint development is a worthwhile goal in Chicago, which will support public transportation and provide considerable benefits to the transit agency, the private partner, and the general public. I will identify the benefits and challenges to joint development, illustrating the opportunities and obstacles to implementing these types of projects within the CTA. The centerpiece of my research is a case study on a recent joint development project in Chicago: the CTA and Apple partnership for the refurbishment of the North and Clybourn Red Line station, in which Apple is investing \$3.897 million for station improvements. It is my hope that the success of the CTA and Apple public-private partnership will serve as an example and a catalyst for similar projects in Chicago's future.

In this paper, I will first review the history of America's public transit systems to provide context for the complexities of private investment in transit and the challenges facing mass transit today. Next, I will join the discussion among policymakers, transit officials, and urban planners about ways to meet these challenges. I will then examine the recent CTA and Apple joint development project and review pertinent literature to identify the benefits and limitations of this type of partnership. Finally, I will analyze the potential of pursuing joint development in Chicago and recommend ways to encourage its use. While I find that joint development cannot solve all the challenges of mass transit, it is certainly a worthwhile means to support the lifeblood of America's urbanized societies.

Historical Context

The history and development of modern American transportation is intimately connected with technology and its impacts on urban structure and processes. Understanding the development of mass transit is essential to understanding the complexities of private investment in transportation and the current challenges facing public transportation.

The Beginnings of Mass Transit in America

The American landscape changed rapidly from the mid-1800s to the early 1900s in reaction to industrialization and technological developments. As late as 1860, 80 percent of Americans lived in rural areas with less than 2,500 inhabitants; by 1920, the total number of city residents exceeded those in rural regions. As cities grew, the demand for mass transportation surfaced.

The emergence of mass transit was shaped by current technologies. In 1827, Abraham Brower established the first American public transportation route with the omnibus, a horse-drawn stagecoach.⁸ Known as *Accommodation*, the twelve-seat omnibus ran one-and-three-quarter miles along New York's Broadway Street.⁹ The omnibus had three major detractions: rider comfort over cobblestone streets, the stench of horse manure, and the slow pace of about three to four miles an hour.¹⁰ In response, street railways emerged and gained popularity for marginally improving speeds and creating a smoother ride. John Mason initiated the first horse-drawn streetcar service along a less-than-one-mile leg of the Bowery in New York City in 1832.¹¹

By 1855, private companies were operating nearly 600 omnibuses on 27 transit routes in Manhattan. ¹² By the mid-1800s, 415 street railway firms employed 35,000 workers who operated 18,000 streetcars on 3,000 miles of track. ¹³ Over one billion passengers rode the streetcar system each year, and

- 7. Conzen, "Impact of Industrialism and Modernity," 333-355.
- 8. Metropolitan Transportation Authority, "History and Chronology."
- 9. Cudahy, Cash, Tokens, and Transfers, 10.
- 10. Conzen, "Roots of the American Modern City: Cities in the Age of Industrialism" (lecture, University of Chicago, Chicago, October 29, 2009).
- 11. Cudahy, Cash, Tokens, and Transfers, 11.
- 12. Metropolitan Transportation Authority, "History and Chronology."
- 13. Cudahy, Cash, Tokens, and Transfers, 12.

capital investment totaled \$150 million. 14 The profitability of mass transit created a steady flow of private investors and sparked continued innovations in transport technologies to address problems and improve the system.

In response to downtown congestion and gridlock, the elevated rail was established to "rise above congestion." On February 14, 1870, the first regular elevated railway service began in New York City. ¹⁵ In response to the stench and pollution from horse, coal, and steam power, Francis Sprague invented electric traction in the late 1880s and radically improved mass transit systems. ¹⁶

Chicago's Rapid Transit System

Between 1872 and 1900, over seventy private companies had plans for establishing Chicago's elevated rail system.¹⁷ Ultimately, four companies came to dominate Chicago's rapid transit industry: the Chicago and South Side Rapid Transit Company, the Lake Street Elevated Railway, the Metropolitan West Side Elevated Railroad, and the Northwestern Elevated Railroad. The Chicago and South Side Rapid Transit Company provided the first elevated rapid transit service in 1892, with trains running on a 3.6 mile track between Congress and Thirty-ninth streets.¹⁸ Because building elevated rails on streets required the consent of property owners, the South Side Rapid Transit Company strategically bought city-owned property along alleyways in order to avoided bribes and potential lawsuits from property owners.¹⁹ The lines earned the nickname, "the Alley L."

- 14. Ibid.
- 15. Metropolitan Transportation Authority, "History and Chronology."
- 16. Cudahy, Cash, Tokens, and Transfers, 35-42.
- 17. Chicago-"L".org, "The Original 'L' Companies."
- 18. Moffat, The "L", 8.
- 19. Ibid., 21.

The novelty of rail transit and the success of the Chicago and South Side Rapid Transit Company encouraged investment in additional rail lines, yet many investors were not prepared or able to maintain the lines. Rail magnate Michael McDonald, known as "King Mike," used his gambling fortune and vice power to build the Lake Street Elevated Railway.²⁰ When it opened in November 1893, fifty thousand patrons rode the line.²¹ A year later, Charles Tyson Yerkes bought the Lake Street line for \$1 million; less than a decade later, the company went bankrupt.²² In 1904, the Chicago and Oak Park Elevated Railroad (C&OP) took over the line.²³

The Metropolitan West Side Elevated Railroad, known as the Met, opened in 1895 as the third rapid transit line in Chicago and the country's first permanent electrified elevated transit line. ²⁴ The railway eventually expanded to the western suburbs of Berwyn, Maywood, and Westchester. While the elevated railways were constructed in undeveloped areas, planners hoped that the new railways would stimulate residential development, which would then provide additional riders and revenue for the system. ²⁵ The Northwestern Elevated Railroad, the fourth rapid transit line in Chicago, started in 1900, and extended its line far north to Evanston and Wilmette. ²⁶ In less than a decade, a complex rapid transit system was forming and shaping the urban landscape.

While private interest and investment in mass transportation proved strong at first, the difficulties of operating and maintaining the system

^{20.} Borzo, Chicago "L," 36-38.

^{21.} Chicago-"L".org, "Lake Branch."

^{22.} Borzo, Chicago "L," 39.

^{23.} Ibid., 41.

^{24.} Ibid, 39-42.

^{25.} Moffat, The "L", 156.

^{26. &}quot;The Original "L" Companies."

became increasingly apparent. As the South Side El and Lake Street El experienced, private rail investors struggled to negotiate with property owners over the building of railways, because of noise and "decreased property values."27 Mismanagement, as with King Mike, led to the chaotic formation of rail lines and eventual bankruptcy. Because elevated rail was competing with street railways, some stations were created only onequarter mile apart in an attempt to serve neighborhoods as closely as the competing streetcars.²⁸ With costly maintenance, distress among property owners, increased competition, and the lack of sustainable profits, the excitement of mass transit slowly faded. Recognizing these difficulties, the four private rail companies came together and formed the Chicago Elevated Railroads (CER) in 1913, and officially merged in 1924 as the Chicago Rapid Transit Company (CRT) under Samuel Insull.29 The consolidation allowed for higher quality service and more seamless travel among different lines. Under the CRT, mass transit reached its peak with approximately 227 miles of track and more than 600,000 riders daily.30

Success was short-lived. The Great Depression and World War II eliminated funds for maintenance, leaving many stations in disrepair. Many private companies disinvested, abandoned their transit lines, or simply went bankrupt. Transit systems across the country, such as in New York and Boston, faced similar situations to Chicago's. The challenges facing transit resulted not merely from competition, overcapitalization, over-expansion, or rising costs; the decline in public transit is inextricably connected to the rise of the automobile and the policies that supported its use.

^{27.} Moffat, The "L," 21.

^{28.} Borzo, Chicago "L," 104.

^{29.} Chicago-"L".org, "Unification and the Subways."

^{30.} Condit, Chicago 1910-29, 236.

The Rise of the Automobile and the Suburbanization of America

In the mid-twentieth century, a new shift in the American landscape took place as people moved from cities to the surrounding suburbs in an effort to escape the congestion, chaos, and social ills associated with urban life. The economic booms following the two world wars created mass consumerism; Americans could afford automobiles and homes in the suburbs. The government also offered home loans to war veterans and tax benefits for home ownership.³¹ Suburbia was a glamorous and an attractive alternative to the inner-city slums.³² With names like "Crystal Stream," suburban towns exemplified the American Dream for young couples.³³

The federal government supported the suburban ideal by sponsoring the expansion of roads and highways. A coalition of private pressure groups, including tire manufacturers and dealers, parts suppliers, oil companies, service-station owners, and road builders lobbied the federal government.³⁴ Renowned architects like Frank Lloyd Wright and Le Corbusier embraced the automobile as a revolutionary liberating force.³⁵ Additionally, the federal government supported the funding of roads to aid with unemployment and stimulate the economy during the Great Depression. President Franklin D. Roosevelt suggested that the building of self-sustaining transcontinental highways and valuable

^{31.} Jackson, Crabgrass Frontier.

^{32.} The chaos and social ills of urban life have been well documented by sociologists, many of whom are part of the Chicago School of sociology. See Georg Simmel's *The Metropolis and Mental Life* (1903); Lewis Mumford's *The Culture of Cities* (1938); and Louis Wirth's *Urbanism as a Way of Life* (1938).

^{33.} Kenney, "Suburbanization in the 1950s."

^{34.} Jackson, Crabgrass Frontier, 164.

^{35.} Ibid., 175.

infrastructure would be an effective "national-defense and business pump-priming measure." $^{\rm 36}$

The federal government committed significant funds to highways, superhighways, and roads. In 1932, *American Highways* reported that the federal government "appropriated \$120 million as an advance to the states for road construction on the Federal Aid Highway System and \$16 million for roads in the National Forests, Parks, Indian Reservations, and Public Domain."³⁷ With the passing of the Federal Aid Highway Act of 1956, \$24.8 billion would be spent to construct a 65,000-km national system of interstate and defense highways.³⁸ After World War II, Washington spent more than \$24 billion on roads, aviation, and waterways in contrast to about \$375 million spent on mass transit.³⁹

The Concern for Mass Transit and Subsidies

While the federal government focused primarily on automobile and road policies, Congress did address some of the challenges facing public transit systems. Congress passed the Urban Mass Transportation Act of 1964. Administered by the Housing and Home Finance Agency, known today as Housing and Urban Development (HUD), the act created the Urban Mass Transportation Administration (UMTA). The agency would provide federal assistance for mass transit projects, including \$375 million in assistance to mass transit systems over a three-year period on a two-for-one dollar federal matching ratio. 40

In 1966, Congress established the Department of Transportation (DOT) to coordinate all of America's transportation needs and to

- 36. Mertz, "Origins of the Interstate."
- 37. Ibid.
- 38. Weingroff, "Highway Act of 1956."
- 39. Young, Chicago Transit, 131.
- 40. Tecson, Regional Transportation Authority, 32.

differentiate these needs from other U.S. departments. The previous U.S. Bureau of Public Roads, a division under the U.S. Department of Commerce, changed its name to the U.S. Federal Highway Administration (FHWA) and moved under DOT.⁴¹ In addition, the UMTA under HUD moved to DOT.⁴² The newly established Department of Transportation sought to "serve the United States by ensuring a fast, safe, efficient, accessible and convenient transportation system that meets our vital national interests and enhances the quality of life of the American people, today and into the future."⁴³

The Urban Mass Transportation Act of 1964 was extended with the passing of the National Mass Transportation Assistance Act of 1974. The culmination of major lobbying efforts by interested mass transit parties, the Act authorized \$11.8 billion over a six-year period. 44 This landmark act signaled the first time that federal funds were used to cover transit operating costs. 45 With federal subsidies significantly covering costs, transit officials lacked the incentive to effectively manage costs. 46 Moreover, people were understandably suspicious that government subsidies covering operating costs were directly increasing employee wages rather than improving the transit system. The early 1980s recession reinforced the public opinion that the federal government had to reduce wasteful spending. 47

To address these concerns, on January 29, 1981, Ronald Reagan established a memorandum on regulations for a majority of U.S. departments,

- 41. Weiner, "Urban Transportation Planning in the U.S."
- 42. Ibid.
- 43. U.S. Department of Transportation, "Mission & History."
- 44. Weiner, "Urban Transportation Planning in the U.S."
- 45. Ibid.
- 46. Savage, "Can Privatization Solve All of Chicago's Public Transportation Problems?"
- 47. Weiner, "Urban Transportation Planning in the U.S."

including the Department of Transportation. President Reagan called for a "new regulatory oversight process that will lead to less burdensome and more rational federal regulation." ⁴⁸ The pro-market philosophy of the Reagan Administration prodded transit agencies to put their finances in order and pushed for more private sector involvement to meet transit needs. ⁴⁹

Moving Forward in the Twenty-first Century

More than two thirds of the U.S. population live in rapidly expanding urbanized areas. ⁵⁰ In light of a demographic shift to cities, increasing prices of gasoline, and a more environmentally conscious population, individuals increasingly understand the importance and value of quality public transport systems, thus establishing the grounds for reforms and improvements. The U.S. Code acknowledges the increasing importance of public transportation. Title 49, Chapter 53, Subsection B states:

"It is in the interest of the United States, including its economic interest, to foster the development and revitalization of public transportation systems that —

- (1) maximize the safe, secure, and efficient mobility of individuals;
- (2) minimize environmental impacts; and
- (3) minimize transportation-related fuel consumption and reliance on foreign oil."51
- 48. Ronald Reagan, "Memorandum Postponing Pending Federal Regulations," http://www.reagan.utexas.edu/archives/speeches/1981/12981e.htm (accessed October 29, 2009).
- 49. For example, under the Reagan Administration, in 1984 the UMTA issued a Policy on Private Participation in the Urban Mass Transportation Program. See Weiner, "Urban Transportation Planning in the U.S."
- 50. Public Transportation, U.S. Code Title 49, § 5301.
- 51. Ibid.

While the demand for high-quality transport systems is increasing, mass transit is plagued with problems that no single solution can remedy.

The Challenges of Mass Transit

This section briefly examines three major problems facing mass transit and sets the stage for strategies that could solve them.

Social and Cultural Implications

The story of mass transit in the twentieth century is of the shift from riding mass transit systems to using automobiles. Public transport is often regarded as an inferior good, meaning a good that individuals use less as their incomes rise. The Organisation for Economic Co-operation and Development (OECD) asserts that a fundamental challenge is to "reinvent public transport to encourage the return of the more affluent class." ⁵²

Public transport is not well-adapted to the increasingly complex living and working patterns of individuals. The OECD notes "people are in favour of developing public transport, but in fact most of them use their cars. Public transport is valuable as an option: people are keen on keeping this option open, even if their actual behavior proves the contrary."55

Condition of America's Aging Transit Systems

The Federal Transit Administration (FTA)'s April 2009 *Rail Modernization Study* assesses the level of capital investment required to attain and maintain a state of good repair (SGR) for the nation's seven largest rail transit operators. SGR is defined using FTA's Transit Economic Requirements Model (TERM) and is based on the asset's type, age, rehabilitation

^{52.} Organisation for Economic Co-operation and Development, *Regulation of Urban Transit Systems*.

^{53.} Ibid.

history, and other factors.⁵⁴ The study finds that "more than one third of agencies' assets are either in marginal or poor condition, indicating that these assets are near or have already exceeded their expected useful life."⁵⁵

Funding Matters

Mass transit is currently funded through a combination of federal dollars, state and local taxes, and the fare box. Funding can be divided into two main categories of expenses: operating and capital costs. CTA fare box revenue covers roughly 45 percent of operating costs and the rest is covered primarily by the Regional Transportation Authority. Fe Reduced fare subsidies, advertising and concessions, and contributions from local governments are other small sources of revenue for operations. CTA's capital costs are funded primarily through the Federal Transit Administration (FTA), the Illinois Department of Transportation (IDOT), the Regional Transportation Authority (RTA), and CTA bonds. However, in poor economic times with poor tax receipts, funding from the government is simply insufficient.

Funding is arguably the biggest challenge facing mass transit systems. In March of 2009, *The New York Times* reported drastic fare hikes and service cuts to cover the Metropolitan Transportation Authority's \$1.2 billion budget deficit.⁵⁸ In October of 2009, the *Washington Post*

- 54. Federal Transit Administration, Rail Modernization Study.
- 55. Ibid.
- 56. Chicago Transit Authority, Financial Statements and Supplementary Information.
- 57. Ibid.
- 58. William Neuman, "M.T.A. Votes to Raise Fares and Cut Service" *New York Times*, http://www.nytimes.com/2009/03/26/nyregion/26mta.html (accessed October 28, 2009).

reported similar cuts.⁵⁹ In the same month, the *Chicago Tribune* announced the CTA's budget proposal to cut services and raise fares to cover a projected \$300 million budget deficit.⁶⁰ In August 2009, Transportation for America reported: "Nearly 90 percent of transit systems have had to raise fares or cut service in the past year and among the 25 largest transit operators, 10 agencies are raising fares more than 13 percent."⁶¹

Meeting the Challenges

This section will define four strategies that can enhance mass transit networks: public-private partnerships, transit-oriented development, value capture, and joint development.

Public-Private Partnerships

The U.S. Department of Transportation defines public-private partner-ship (P3s or PPPs) as "contractual agreements formed between a public agency and a private sector entity that allow for greater private sector participation in the delivery and financing of projects." The National Council on Public Private Partnerships expands on this definition, noting that through this agreement, the skills and assets of each sector are shared in delivering a service or facility. In addition to the sharing of resources, each sector shares in the risks and rewards.

- 59. James Hohmann, "Metro Bracing to Make Further Cuts," *Washington Post*, http://www.washingtonpost.com/wp-dyn/content/article/2009/10/08/AR2009100802583.html (accessed October 28, 2009).
- 60. Jon Hilkevitch, "CTA plan: \$3 for train, 25-cent bus fare hike, job losses," *Chicago Tribune*, http://www.chicagobreakingnews.com/2009/10/ctas-plan-3-train-rides-25-cent-bus-fare-hike.html (accessed October 28, 2009).
- 61. Transportation for America, *Stranded at the Station*, http://t4america.org/resources/stranded/ (accessed October 28, 2009).
- 62. Federal Highway Administration, "P3 Defined."
- 63. National Council on Public Private Partnerships.

Public-private partnership is a broad term applicable to all types of infrastructure, including hospitals, libraries, technology facilities, wastewater treatment plants, energy facilities, and transportation. Public-private partnerships can arise in a variety of forms, and no two PPPs are alike. Major public-private partnerships in transportation infrastructure include the New York Avenue Metro Station in Washington, DC, I-PASS Public-Private Partnerships for the Illinois Tollway, the Highway Transportation Corporation in Missouri, Pocahontas Parkway in Virginia, Grand Central Terminal in New York, and Union Station in Washington, DC. Mashington, DC. Mashington, DC. Mashington, DC.

Transit-Oriented Development

Transit-Oriented Development (TOD) has gained increasing popularity as a way to reverse urban sprawl and address a number of urban problems, including traffic congestion, affordable housing shortages, and air pollution. The California Department of Transportation defines TOD as "moderate to higher density development, located within an easy walk of a major transit stop, generally with a mix of residential, employment, and shopping opportunities designed for pedestrians without excluding the auto. TOD can be new construction or redevelopment of one or more buildings whose design and orientation facilitate transit use." The Regional Transportation Authority of Northeast Illinois defines TOD as "development influenced by and oriented to transit service that takes

- 64. For a comprehensive list, see the Government Accountability Office's "Public-Private Partnerships: Terms Related to Building and Facility Partnerships" (April 1999).
- 65. For case studies on public-private partnerships, see The National Council for Public-Private Partnerships, "Case Studies," http://www.ncppp.org/cases/index.shtml#transportation; Federal Highway Administration, "Case Studies," http://www.fhwa.dot.gov/ipd/p3/case_studies/index.htm.
- 66. Transit Cooperative Research Program, *Transit-Oriented Development and Joint Development*, 6.

advantage of the market created by transit patrons."⁶⁷ Transit-oriented development has attracted considerable interest as a way to leverage economic development, respond to shifting market demands and lifestyle preferences, and promote smart growth in the center of the city.

Value Capture

The intimate connection between transportation networks and urban land values has only recently been realized. In the past, property owners and the public regarded areas around transit as negative, noisy, and dirty. However, more research reveals that areas along a transit route or close to a station create numerous benefits that were previously overlooked. When a community invests in or improves transit, property values, among other benefits, increase. With value capture, beneficiaries of transit, such as landowners and developers, contribute to the expected benefits that result from the transportation improvement before the investment. Several strategies can be used to capture the created value from transportation investments and improvements. The Center for Transportation Studies (CTS) describes eight key value capture mechanisms: land-value taxes, tax-increment financing; special assessments; transportation utility fees; development impact fees; negotiated exactions; air rights; and joint development.

Joint Development

The National Council for Urban Economic Development, known today as the International Economic Development Council, defines joint development as a "public-private partnership designed to decrease the costs

- 67. Cervero et al. Transit-Oriented Development in the United States, 6.
- 68. Smith and Gihring, Financing Transit Systems Through Value Capture.
- 69. Ibid.
- 70. Center for Transportation Studies at University of Minnesota, *Value Capture for Transportation Finance*.

of operating or constructing public transportation systems, stations or improvements through creative public-private financing arrangements."⁷¹ Cervero, Landis, and Hall define joint development as "any formal agreement or arrangement between a public transit agency and a private individual or organization that involves either private-sector payments to the public entity or private-sector sharing of capital costs in mutual recognition of the enhanced real estate development potential or market potential created by the siting of a public transit facility."⁷² At the heart of all definitions of joint development is the idea of *quid pro quo*.

Joint development is considered a value capture strategy because the benefits created through transportation improvements are partially "captured" to support the development of the improvement in the first place.⁷³ Joint development comes in the form of:

1. Leases (Land, Air, or Subsurface Rights)

The transit agency leases its land parcels, development rights or unimproved space to private developers or commercial tenants. ⁷⁴ Leasing out property adjacent to or within the transit facility or the right to develop above or below facilities captures the full value of property and can help offset operating costs or capital improvements. ⁷⁵

2. Incentive-based Agreements (Zoning Bonuses)

The public authority grants developers zoning bonuses in the form of

- 71. Zhirong et al., "Joint Development as a Value Capture Strategy in Transportation Finance."
- 72. Cervero et al., Transit Joint Development in the United States, 4.
- 73. Zhirong et al., "Joint Development as a Value Capture Strategy in Transportation Finance," II–158.
- 74. Cervero et al., Transit Joint Development, 4.
- 75. Zhirong et al., "Joint Development as a Value Capture Strategy in Transportation Finance," II–158.

density bonuses, additional floors, or additional FAR (floor-area ratio, which is the ratio of the total building floor area to the area of its zoning lot) for providing a transit improvement, such as the construction or maintenance of passageway connections and escalators.

3. Connection Fee Programs

A private tenant or landowner pays for the right to connect to a transit project, paid through a one-time fee or annual connection charge.

4. Construction Cost Sharing

The developer contributes to construction costs and receives a benefit, such as integration of the business within a transit station or a connection.⁷⁶

Methodology

I argue that joint development is a worthwhile goal in Chicago, supporting public transportation and providing considerable benefits to the transit agency, private partners, and the general public. To determine the potential benefits and limitations of joint development, I conducted a literature review and interviewed transit officials from three major transit agencies. I reviewed existing research conducted by the Transportation Research Board, studied relevant scholarly works and reports, and examined pertinent transit policies and legislation. The literature review allows me to identify any procedural barriers and incentives to joint development, as well as extract the lessons learned from past joint development projects. I interviewed officials from the Washington Metropolitan Area Transit Authority (WMATA) to gain insight from the agency with the most experience in joint development projects. I also interviewed officials from the Metropolitan Transportation Authority (MTA) and the Southeastern Pennsylvania Transportation Authority (SEPTA), whose older systems are comparable to the CTA's and thus face different challenges compared to newer systems.

The centerpiece of my research is a case study on the 2010 CTA and Apple joint development project, the first PPP deal of its kind in Chicago. Apple invested \$3.897 million in improvements to the North and Clybourn Red Line station. I interviewed relevant parties involved in or knowledgeable about the deal: the CTA, an Apple expert, the general public, and area businesses.

The Benefits and Success of Joint Development

This section illustrates the benefits that make joint development an attractive and worthwhile goal, as well as revealing the opportunities for pursuing similar projects in the future.

Enhanced Property Values

There is a strong connection between transit accessibility and land value. In an empirical study of residential land values in southwest Chicago before and after the construction of CTA's Orange Line, McDonald and Osuji found that properties within one-half mile of planned station sites rose in value by 17 percent. The Gruen Gruen & Associates studied ninety-six Chicago-area CTA and Metra stations and concluded that apartments located closer to transit stations have higher rents and higher occupancy rates than comparable apartments located further away. In Cervero's study of commercial properties around five joint development projects in Washington, DC, and Atlanta, office rents at or near stations were 15 percent higher than rates for comparable properties elsewhere (roughly three dollars more per gross square foot). A 1993 study of office development around twenty-five BART stations in the San Francisco area found

- 77. McDonald and Osuji, "The effect of anticipated transportation improvement on residential land values."
- 78. Gruen Gruen & Associates, The effect of CTA and Metro stations on residential property values.
- 79. Cervero, "Rail Transit and Joint Development."

increased land values within 1,000 feet of a station. ⁸⁰ Another San Francisco study found that the land price within 1/4 mile of a station was \$74 per square foot and decreased to \$30 per square foot farther from the station. ⁸¹ Commercial buildings at or near transit stations, particularly stations in which there has been joint development, outperformed the broader real estate market during the 1980s. Transit system ridership was positively correlated with office rent premiums, low vacancy rates, and high absorption rates. ⁸²

Increased Revenue to the Public Sector

Joint development can generate revenue directly through land leases or development rights and indirectly by attracting new riders and raising more tax revenue from surrounding businesses. The few empirical studies demonstrate that the amount of revenue generated by public-private partnerships is small. While joint development may not play a significant role in transit financing, with less investment from federal and state agencies, every investment in transit counts. As Robert Paley stresses: "Each station is significant. I mean, whenever you're investing in any station, it's never a small amount of money — it's always significant."⁸³

In Cervero, Landis, and Hall's comprehensive study of 117 joint development projects, the projects have yet to generate a great deal of income for local transit operations. With the exception of New York City's system, "capital contributions from joint development have generally amounted to less than 1 percent of yearly capital expenditures. Furthermore, annual payments generally account for an even smaller

- 80. Cambridge Systematics, Economic Impact Analysis of Transit Investments.
- 81. Doherty, "Funding public transport development."
- 82. Cervero et al., Transit Joint Development in the United States, 147.
- 83. Interview with Robert Paley, director of transit-oriented development, Metropolitan Transportation Authority, March 15, 2010.

share of annual operating costs."⁸⁴ The study also found that transit officials did not see revenue as the primary benefit of joint development; only seven respondents believed joint development could have a substantial revenue yield.⁸⁵ My interviews reflected this sentiment. Robert Paley of the MTA's NYCTA noted: "[Joint development] is never going to be a big part of the funding equation . . . It really is not so much a funding opportunity as it is an opportunity to use real estate and transit facilities to effectively and creatively maximize the full public benefit."⁸⁶

Cervero notes that the large requisite capital and operating expenses inevitably dwarf the revenues that result from joint development, ⁸⁷ and transit officials may not negotiate the best deals: "Public transit officials might be getting the shorter end of the stick at the bargaining table, particularly when up against seasoned entrepreneurs and savvy real estate brokers." ⁸⁸ Joint development is still a relatively new practice, with few project examples to fully measure its financial implications.

Between 1970 and 2002, the Washington Metropolitan Area Transit Authority (WMATA) entered into thirty-eight joint development projects that generated approximately \$6 million dollars in annual revenues. ⁸⁹ As of 2006, the WMATA reported fifty-eight joint development projects and average annual revenues of \$15 million. ⁹⁰ Between 1976 and 2006, the WMATA earned \$191 million from joint development. ⁹¹ Other cities

- 84. Ibid., 162-163.
- 85. Cervero et al., Transit Joint Development in the United States, 95-96.
- 86. Interview with Robert Paley, director of transit-oriented development, the Metropolitan Transportation Authority, March 15, 2010.
- 87. Cervero et al., Transit Joint Development, 163.
- 88. Ibid., 163.
- 89. Cervero et al. Report 102: Transit-Oriented Development, 9.
- 90. Bottigheimer, "Redefining What We Expect From Joint Development."
- 91. Ibid.

have seen more modest financial benefits from joint development. As of 2004, Los Angeles's Metropolitan Transportation Authority received nearly \$3.5 million annually in air-rights lease revenues. ⁹² San Francisco's BART receives \$75,000 annually in ground-lease revenue at the Castro Valley Station. ⁹³

Increased Transit Ridership

Transit officials intuitively support joint development because it draw individuals to station areas, thereby increasing system patronage. ⁹⁴ A key concern is whether joint development adds new transit trips or simply redistributes transit trips from one area to another. ⁹⁵

Leck found that the built environment, population density, and employment density exert a strong influence on travel behavior, even when controlling for sociodemographic variables such as income and age. He found that residents who live in more diverse urban environments are more likely to commute by transit. Lund, Cervero and Wilson determined that residents living near transit stations are about five times more likely to commute by transit than the average resident that works in the same city. With these results in mind, to the extent that joint development does stimulate high-density development,

- 92. Cervero et al. Report 102: Transit-Oriented Development, 20.
- 93. Ibid., 393.
- 94. Interviews with Bill Trumbull, general manager of real estate and asset management, the Chicago Transit Authority, February 16, 2010, Robert Paley, director of transit-oriented development, the Metropolitan Transportation Authority, and Joseph C. Chan, director of real-estate development, the Metropolitan Transportation Authority, March 15, 2010.
- 95. Cervero et al., Transit Joint Development, 163.
- 96. Leck, "The Impact of Urban Form on Travel Behavior: A Meta-Analysis."
- 97. Lund, et al. Travel Characteristics of Transit-Oriented Development in California.

individuals may have a greater likelihood of choosing transit over other transport alternatives and increase overall system patronage.

In a 1983 study of nine joint development projects, Keefer estimated that every one thousand square feet of new commercial development at or near a transit station generated an additional six trips per day and between 37 to 82 percent of these were new trips. Keefer postulated that the nine projects increased annual fare box revenues by \$11.4 million. Reverse, Landis, and Hall, on the other hand, found that office growth near five stations with joint development had a positive, though fairly small, impact on transit ridership.

Improved Urban Form

Rapid suburbanization and urban sprawl inefficiently consume land, causing farmland, natural areas, and other open spaces to disappear quickly and produce fiscal and quality of life problems. ¹⁰⁰ Sprawling growth cost more than \$21,000 per residential and nonresidential development. ¹⁰¹

In response to the costs of urban sprawl, new planning theories have been championed. New Urbanism promotes pedestrian-friendly and diverse neighborhoods with accessible public spaces and community institutions: "Urban places should be framed by architecture and land-scape design that celebrate local history, climate, ecology, and building practice." Smart growth promotes compact, pedestrian-friendly neighborhoods, community and stakeholder collaboration, place-making, mixed-land uses, open space, and transit-oriented development. 103

- 98. Keefer, An Interim Review of Nine UMTA-Assisted Joint Development Projects.
- 99. Cervero et al., Transit Joint Development, 167.
- 100. Dierwechter, Urban Growth Management and Its Discontents, 22.
- 101. Burchell et al., Sprawl Costs, 50-63.
- 102. Congress for the New Urbanism, "Charter of the New Urbanism."
- 103. Smart Growth Network, "About Smart Growth."

Joint development supports urban planning principles that seek to resolve the costs of urban sprawl. It has the potential to reduce automobile dependency, increase pedestrian and bicycle-originated transit trips, foster safe stations, enhance surrounding area connections to transit stations including bus access, provide mixed-use development, and promote active public spaces near transit stations.¹⁰⁴

The Barriers and Challenges to Joint Development

Despite its benefits, "joint development has not yet been adopted *as a major element or centerpiece of transit agency policy*. If anything, joint development has occurred in different ways and for different reasons, often through the leadership of individuals who are not employees or officials of a transit agency." This section highlights the barriers and challenges to joint development that prevent its full implementation.

Barriers to Joint Development in the United States

The goals and actions that characterize public and private agencies create challenges to joint development. Most transit agencies, like the CTA, focus on delivering quality, affordable rail and bus services that link people, jobs, and communities. ¹⁰⁶ Its real-estate business has been limited to leasing concessionary spaces within transit stations. ¹⁰⁷ With a priority on transit operations above all other considerations, it is easy to overlook joint development as a mechanism for enhancing the quality of transit.

- 104. Washington Metropolitan Area Transit Authority, "Joint Development & Real Estate."
- 105. Cervero et al., Transit Joint Development, 55.
- 106. Chicago Transit Authority, "Overview, Mission Statement, Our Values."
- 107. Cervero et al., Transit Joint Development, 55.

Similar to most public-service entities, transit agencies are bureaucracies. ¹⁰⁸ Bureaucratic rules and regulations conflict with the entrepreneurial risk-taking and creativity of private partners in joint development.

Until the late 1970s, the majority of new development occurred in suburban areas. With a limited supply of land in "hot" real estate areas, transit agencies did not realize they had valuable real estate. ¹⁰⁹ The absence of valuable land, the key ingredient in development, prevents the pursuit of joint development deals.

External factors including government assistance and established laws present challenges to joint development. Transit officials were not pressured to look for alternative financing from the private sector because they could rely on federal and state bailouts. Additionally, prohibitive legislation and complicated property rights prevent transit agencies from pursuing joint development. Alex Flemming notes that SEPTA's legislation prohibits developing property for money. In other words, private parties must drive joint development. 110 Robert Paley notes that the MTA is composed of many operating agencies, each of which is a successor to a railroad, transit operator, or other body that held its properties in a variety of ways. Many of the properties are reversions. For example, a property deed is given to a railroad company under the premise that the land is used for transit, but if it is developed otherwise, the land reverts back to the original property owner. 111 Robert Paley asks: "If you sell your property as a transit agency because you're going to do joint development, does that kick in the reverter?"112

108. Ibid.

109. Ibid.

110. Interview with Alex Flemming, senior long-range planner, SEPTA, March 8, 2010.

111. Interview with Robert Paley, director of transit-oriented development, MTA, March 15, 2010.

112. Ibid.

The proven success of joint development in American cities shows that these challenges can and have been overcome. First, given the current poor economic climate and problems with funding, transit agencies realize the need to look for innovative and alternative financing sources. Second, demographic shifts to urbanized areas create a need for additional real estate and transit development or improvements in the city. Third, joint development supports the rise of recent urban planning movements and theories like New Urbanism and smart growth that seek to reform the damages of urban sprawl. Finally, interest in public-private partnerships has led governments to seek legislative or procedural changes that encourage joint development and private sector investment.

Barriers to Joint Development Unique to Chicago

First, much of Chicago's transit system is elevated, with stations that exit to street level and few with direct connections to adjacent buildings. ¹¹³ Joint development typically involves developing on or adjacent to subway stations, so development at the elevated level can be complicated.

Second, large stretches of CTA's rail lines run parallel to, or are within the rights-of-way of either commercial rail lines or interstate divided highways. 114 While running transit along the median of an interstate may save the transit agency from paying for a new right-of-way, it decreases transit accessibility for riders and eliminates opportunities to promote higher densities and economic growth around the stations. 115

113. Chicago Transit Authority et al., *Transit Friendly Development Guide: Station Area Typology.*

114. Ibid.

115. Robert Dunphy, Deborah Myerson, and Michael Pawlukiewicz, *Ten Principles for Successful Development Around Transit* (Washington DC: Urban Land Institute, 2003).

Third, a large number of transit stations are owned by the city of Chicago, while the CTA operates and maintains the system. ¹¹⁶ If the CTA were to initiate joint development, the CTA would have to coordinate with the private partner, the city, and other relevant bodies.

Fourth, the CTA has a short list of unused properties, much of them acquired through federal dollars that restrict use to specific transit services. ¹¹⁷ For example, the CTA cannot develop an electrical substation nor can it develop under a right of way below the tracks.

Challenges During Implementation of Joint Development

A prospective private partner's interest in joint development may be short-lived when working with a public agency's bureaucracy. Joint development projects take time, and there must be sustained interest and someone championing the project. ¹¹⁸ Unforeseen technical problems such as building over tracks, on top of subways, or in other very constrained environments, may complicate plans, increase costs, and exceed project timelines. ¹¹⁹

Setting the private-sector dollar contribution can be an obstacle. Cervero, Landis, and Hall found that approximately half of all transit agencies surveyed had some difficulty negotiating the amount and type of private contribution. The lack of formal guidelines and policies among transit agencies waste time and make it difficult to decipher the goals and responsibilities of each partner in the project. Robert Paley of

116. Personal correspondence with Bill Trumbull, general manager of real estate and asset management, the Chicago Transit Authority, April 22, 2010.

117. Ibid.

118. Interview with Robert Paley, director of transit-oriented development, the MTA, March 15, 2010.

119. Interview with Robert Paley, director of transit-oriented development, the MTA, March 15, 2010.

120. Cervero et al., Transit Joint Development, 95.

the MTA notes that real-estate development is complicated by a broad range of constituencies with different interests and needs, localities, transportation needs, and broader regional needs.¹²¹

Most importantly, no joint development can overcome weak market conditions. 122 All transit officials interviewed commented that development must be market driven. Joseph Chan of the MTA notes that Long Island's Ronkonkoma station successfully established station retail; however, because the market turned, the project has yet to create the expected real estate development. 123

Case Study: CTA and Apple Public-Private Partnership

The CTA and Apple partnership for the refurbishment of the North and Clybourn Red Line station is the first major joint development project for the Chicago Transit Authority. After providing a history of the station and the surrounding areas, this section studies the deal from the perspective of Apple, the CTA, the public, and area businesses.

History of the North and Clybourn Red Line Station and the Surrounding Neighborhoods

Designed by Shaw, Naess, and Murphy in 1939, the North and Clybourn station was regarded as a work of art. With its sleek and streamlined appearance, the station house integrated qualities characteristic of Art Moderne style: a flat roof, rounded edges, and tall glass windows. It was

- 121. Interview with Robert Paley, director of transit-oriented development, the MTA, March 15, 2010.
- 122. Cervero, 177.
- 123. Interview with Joseph Chan, director of real-estate development, the MTA, March 15, 2010.
- 124. Chicago-L.org, "Stations North/Clybourn."

the only facility in Chicago's initial system of subways to have an above-ground station house. Like many other subway stations of the time, it had attractive conveniences such as public restrooms, lockers, drinking fountains, and pay phone booths.¹²⁵

The station sits on the border of two Chicago communities: Lincoln Park to the north and the Near North Side to the south. Lincoln Park has been home to affluent residents near the park and lakefront, and to working class immigrants. ¹²⁶ In the early twentieth century, Italians, Poles, Romanians, Hungarians, and Slovaks worked in industrial plants, such as furniture factories and the Deering Harvester Works, concentrated along the River. ¹²⁷ Following urban renewal efforts, Lincoln Park is regarded as one of the highest-status neighborhoods of the city.

The Near North Side is a community of extremes. In his sociological study of Chicago's Near North Side, Harvey Zorbaugh writes: "The greatest wealth in Chicago is concentrated along the Lake Shore Drive, in what is called the 'Gold Coast.' Almost at its back door, in 'Little Hell,' is the greatest concentration of poverty in Chicago." In the 1950s, Little Hell was razed and replaced with public housing. By the 1990s, Cabrini-Green was the nation's most infamous public housing project and widely regarded as "all that was wrong with public housing in the United States." 129

The presence of industrial warehouses to the northwest and Cabrini-Green in the southeast created a stigma around the North and Clybourn area, which affected the CTA station. Station patronage dropped and maintenance was continually deferred. To save costs, in January 1982, service at the North and Clybourn stop was suspended

125. Ibid.

126. Encyclopedia of Chicago, "Lincoln Park."

127. Ibid

128. Zorbaugh, The Gold Coast and the Slum.

129. Phillips, City Lights.

on nights, weekends, and holidays.¹³⁰ In fall 1991, hours were expanded to include some weekend and holiday service, but the station remained closed at night. When the area revitalized in the mid 1990s, the part-time status was repealed.¹³¹ The station now operates twenty-four hours a day, seven days a week.

In the 1990s and 2000s, the area around North and Clybourn witnessed considerable development and investment, with businesses capitalizing on the availability of land, demolition of Cabrini-Green, and proximity to wealthier neighborhoods. Area shops earned on average \$400 in sales per square foot, "a figure that rivals the best regional malls and, in the Chicago area, is second only to the Magnificent Mile." A 1998 *Crain's Chicago Business* article describes the changes: "As the industrial hub of North and Clybourn avenues quickly evolves into Chicago's hottest retail Mecca, a delicate balance between housing and manufacturing is being upset by a stampede of shoppers." 133

With the area rapidly evolving from "gang turf to yuppiedom," many community members were concerned about gentrification and the displacement of lower-income families. ¹³⁴ Manufacturers were concerned about the loss of industrial land, and with city support, designated 115 acres between Clybourn Avenue and the Chicago River a Planned Manufacturing District (PMD). ¹³⁵ The first of its kind, the Clybourn Corridor PMD restricted the rezoning of industrial land for nonindustrial uses to protect firms from land uses incompatible with manufacturing and to preserve manufacturing jobs. Other business owners complained that

- 130. Chicago-L.org, "Stations North/Clybourn."
- 131. Ibid.
- 132. Baeb and Corfman, "North-Clybourn retail spreading south."
- 133. George, "Clybourn as Retail Hotbed."
- 134. Gallun, "New Development near Cabrini."
- 135. Rast, Curbing Industrial Decline or Thwarting Redevelopment?

increased traffic made shipping and receiving difficult, such as Bruce Liimatainen, president of steelmaking company A. Finkl & Sons Co.: "What happens when you get too much development too quickly is there isn't enough parking, and that creates conflict." Bruce Kaplan, president of Northern Realty Group noted, "There is a point at which the traffic will become so congested that customers will begin to shy away." 137

The increase in the number of riders to the station reflects these changes. In 2000, the annual ridership level was 1,111,792; in 2009, the number of rides increased by 31.6 percent to 1,463,170. ¹³⁸ For the whole rail system, the annual ridership level in 2000 was 147,194,341 and in 2009, the number of rides was 180,991,036, showing a 30 percent increase. ¹³⁹

Overview of the CTA and Apple Public-Private Partnership

In July 2007, *Crain's Chicago Business* announced that Apple was looking to establish a retail store on the triangular site bounded by North and Clybourn avenues and Halsted Street.¹⁴⁰ Apple was closing a deal with M Development LLC for an 18,400 square foot parcel occupied by a BP filling station, with an estimated property value of \$15 million to \$18 million.¹⁴¹ On November 17, 2008, the city of Chicago issued a permit to demolish the BP station.¹⁴²

In April 2009, Crain's Chicago Business reported that Apple had signed a long-term lease at the North Avenue location, paying an annual rent of

136. Ibid.

137. Ibid.

138. Chicago Transit Authority, Monthly Ridership Report — December 2009; Chicago Transit Authority, Monthly Ridership Report — December 2001.

139. Ibid.

140. Corfman, "Apple eyes Clybourn corridor."

141. Ibid.

142. Allen, "Apple Stores Now & In the Future."



Maps from Crain's Chicago Business and Google Maps.

approximately \$700,000. 143 The location in the Clybourn corridor snubbed Joseph Freed & Associates, developers of Block 37, who had hoped to bring a 6,000 square foot Apple to State Street. 144 Bill Smith, a developer and principal in Smithfield Properties LLC, noted: "The Loop is playing to a slightly lower socioeconomic group than North and Clybourn. Look at the demographics of Lincoln Park." 145 On the other hand, Ty Tabing of the Chicago Loop Alliance notes: "The reality is that Block 37 offers up foot traffic that is around-the-clock, from workers and theater-goers and students to new residents. That's not available at North and Clybourn." 146

Soon after signing a long-term lease for the land, on August 12, 2009, Apple entered into a three-way contract with the Chicago Transit Authority and the city of Chicago. Passed as Ordinance No. 009–92, Apple agreed to work with the CTA to refurbish the North and Clybourn Red Line Station. 147 As many residents of the neighborhood have

- 143. Corfman, "Apple picks North & Clybourn."
- 144. Baeb, "Puma plans store at Block 37; Apple closer to lease."
- 145. Corfman, "Apple picks North & Clybourn."
- 146. Ibid.
- 147. Ordinance 009–92, http://www.transitchicago.com/assets/1/ordinances/009-92_Apple_Inc.pdf (accessed December 10, 2009).

acknowledged, the station was "unsightly" and "clearly worn down." ¹⁴⁸ Apple agreed to refurbish the station if it could landscape the bus turnaround, which was owned by the city of Chicago. In the agreement, Apple paid up to \$1.789 million for the exterior work and up to \$2.108 million for the station interior and platform level. ¹⁴⁹ In return, the city of Chicago leased the bus turnaround to Apple for ten years at no charge and the CTA granted Apple "right of first refusal for naming/sponsorship rights at the station in the event that the Authority chooses to offer such rights for sale" and "right of first refusal to place advertising at the station through the Authority's advertising corridor, if any." ¹⁵⁰

Construction for Apple's retail store began in summer 2009 and construction on the CTA station began in fall 2009. Apple built a roughly 15,000-square-foot store designed by Bohlin, Cywinski Jackson, the architectural firm of Apple's Fifth Avenue store in New York City. 151 By October 2009, the structural steel for the store was erected and by April 2010, half of the exterior work on the CTA station was completed. The new store, referred to as the Lincoln Park location, opened in Fall 2010. 152 The work on the CTA station completed around the same time. During the project, Bill Trumbull, CTA's General Manager of Real Estate and Asset Management, said the project seemed to be going very well. 153

148. Surveys with residents and transit riders, March 17, 2010.

149. Ibid.

150. Ibid.

151. Corfman, "Apple picks North & Clybourn."

152. Lincoln Park Chamber of Commerce, "Lincoln Park Development News."

153. Interview with Bill Trumbull, general manager of real estate and asset management, the Chicago Transit Authority, February 16, 2010.

The Public Perspective: Survey of Transit Riders

I surveyed thirty transit riders on the platform level of the North and Clybourn stop to gain the public perspective on private investment in public transit. The surveys asked riders' opinion on who should be responsible for investing in transit and gathered their perspective about Apple's investment in the CTA.

Twenty riders were surveyed during rush hour on two weekdays, and ten riders were surveyed on a Sunday afternoon. Half of the riders used the North and Clybourn station at least 4 days a week. Of the riders, eleven were shopping, six lived in the area, six worked in the area, four went to school in the area, and they were transferring from the station to a bus. The riders surveyed had the option to skip questions or elaborate on their answers. I administered the surveys, so I could clarify any questions.

The riders were asked to rate the quality of the North and Clybourn station on a scale of I (very poor) to 5 (excellent) in terms of the station interior, the station exterior, general cleanliness, and safety (Table I). Ninety-three percent rated the quality of the station interior, station exterior, and cleanliness of the station as OK, Poor, or Very Poor. In terms of safety, the marks varied, with the majority of riders feeling relatively safe at the station. The riders often indicated that the station was in poor condition, but other stations were in worse condition, which suggests that significant improvements can be made to CTA's facilities overall.

The riders were asked to rate the quality of the surrounding neighborhood, defined as a one-mile (eight-block) radius from the station, in terms of the quality of commercial activity, the quality of housing, visual quality of the neighborhood, traffic congestion, and safety (Table 2). All the riders rated the quality of commercial quality as OK, Good, or Excellent, with 43 percent saying Excellent. For quality of housing, visual quality of neighborhood, and safety, most riders rated those qualities as either OK or Good. For traffic congestion, the marks varied. However, the riders who picked "very poor" felt strongly about the lack of parking and high traffic that make the area dangerous for pedestrians.

Table 1: Transit Riders Rate the Quality of the North and Clybourn Station

	Very Poor n / %	Poor n/%	3 OK n/%	Good n/%	5 Excellent n/%
Station Interior	3 / 10	11 / 37	14 / 47	2/7	0/-
Station Exterior	4 / 14	10 / 34	13 / 45	1/3	1/3
General Cleanliness	3/10	14 / 47	11 / 37	2/7	0/-
Safety	1/3	5 / 17	13 / 45	8 / 28	2/7

Table 2: Transit Riders Rate the Quality of the North and Clybourn Area

	Very Poor n / %	Poor n/%	3 OK n/%	Good n/%	5 Excellent n/%
Quality of commercial activity	0/-	0/-	7/25	9 / 32	12 / 43
Quality of housing	0/-	2/7	13 / 48	9 / 33	3 / 11
Visual quality of neighborhood	1/3	2/7	7/24	12 / 41	7/24
Traffic congestion	7 / 25	5 / 18	10/36	3/11	3/11
Safety	1/3	1/3	10/34	13 / 45	4/14

The low marks of the station interior, exterior, and general cleanliness indicate that the CTA station was worn down and needed improvements. In contrast, riders indicated that the surrounding neighborhood was attractive.

Most of the transit riders hesitated before answering "who funds the CTA?" Four individuals said "No idea," and the rest said taxpayers, the government, and the city. Two other individuals remarked, "Somebody who doesn't know what they're doing" and "Whoever's doing it is doing a poor job." Riders were then asked to select who should be responsible for funding and improving the system from a list of potential sources

Table 3: Rider Opinion on Who Should Be Responsible for Investing in Mass Transit

Funding Sources	Number of Votes
Transit riders	20
Local and state government	23
Federal government	13
Landholders and developers near transit stations	7
Businesses around transit stations (private and public companies)	7
The general public and taxpayers	17

(Table 3). The majority believed that local and state government, transit riders, and the general public and taxpayers should be most responsible. A little less than half believed that the federal government should help fund the CTA. Only seven individuals said "landholders and developers near transit stations" or "businesses around transit stations (private and public companies)."

The last set of questions related to Apple's investment in the North and Clybourn stop. I informed the riders of the deal, and asked for their opinion on whether it was a good or bad idea, and why. These questions were open-ended and allowed for unique and rich responses. Twenty-five responded positively. They raised concerns over CTA's financial state: "Considering the CTA had to make service cuts, they don't have enough money and can't do it themselves;" "there's nowhere else to get money for that kind of thing, especially since the CTA can't pay for it;" "given all the financial issues, limits on state funding — federally, there's no money either." Second, riders acknowledge the benefits to businesses and potential to attract more visitors to the station: "There'll be more traffic in the area and more people coming in;" "a more attractive station would definitely attract more visitors;" "it'll be more accessible to the store and people won't feel as skeptical for getting off here." Third, riders speculated that the improvements would

spruce up the deteriorating station and enhance the community: "It will put less stress on the people;" "it's not our taxes—so good!" Finally, those surveyed focused on Apple's initiative and prestige: "If they're willing to, that's excellent;" "they have the money to improve the area which is needed real bad;" and "Hell yes! Because [the station]'s nasty and Apple is rich."

Five individuals reacted indifferently or negatively to the deal. One person noted that whether the deal is good or not is irrelevant because Apple is acting in its best interest, and the whole system should be revamped. Another person thought it was unfair for Apple to refurbish the station, which should be the CTA's responsibility. Another individual questioned Apple's judgment, because "you can just go downtown for the Apple store."

Expressing general distrust in city and government deals, three individuals mentioned the parking meter fiasco: "It's important for someone to look out for the public interest." Three individuals questioned whether Apple would continue to maintain the station after the contract ends: "Apple is in the business of technology and not public transit—can we trust it?" Others were concerned about increasing corporate sponsorship: "I think it'd be a problem if every station is named after a corporation—that is, if Apple gets naming rights for the station. There should be limits on naming rights and advertising. For example, maybe they wouldn't announce the name of the corporate sponsor, but just have signs up." Another individual argued that Apple is well-received, but other corporate sponsorship is "just annoying—all this corporate space is just annoying. In Millennium Park, there's the McDonald's Cycle Center and McCormick Tribune Tower, etc."

As with all surveys, there is some level of respondent bias. In addition, my sample size of thirty was small. Despite this bias, the surveys do provide valuable insight into the public's perspective on investing in mass transit.

Public opinion raises salient points that must be addressed when pursuing future joint development deals. It is important to keep the public informed, or it can create oppositional barriers and prevent the success of joint development. Similarly, individuals were concerned about the degree of corporate sponsorship and privatization. Despite these concerns, the majority of the riders recognized Apple's investment in transit as a great opportunity for the CTA, suggesting that the public supports private investment in mass transit.

The Private Perspective: Apple's Investment in Transit

I was unable to obtain official responses from Apple, which stated: "We do not participate in research studies of any kind." I did gain valuable insight from Gary Allen, an Apple expert and the owner of ifoAppleStore. com, a comprehensive Web site dedicated to news and information about Apple's retail stores. I also reviewed Apple's press releases and spoke with officials and academics.

Since Apple opened its first store in 2001, visitors, revenue, and earnings have steadily increased. Between 2004 and 2007, the number of store visitors increased from 25.2 million to 102.4 million; in the same period, store revenues increased from \$1.185 billion to \$4.11 billion. The company now has over 225 stores, with eleven designated as "high-profile" stores, including North Michigan Avenue in Chicago, Fifth Avenue and SoHo in New York City, Ginza and Osaka in Japan, Regent Street in London, and Sanlitun in Beijing. Apple designates about \$27 million a year to high-profile stores for brand marketing and promotion. The stores for brand marketing and promotion.

As of 2009, Apple had seven stores in the Chicago suburbs and one store in the city, and Apple was looking for the site of its next retail store within Chicago. When determining store placement, Apple most likely checks its registration database to determine where existing customers

^{154.} Apple's official response came after persistent phone calls to CTA's Apple contact, the Michigan Avenue store, and Apple's corporate office.

^{155.} Gary Allen, "The Stores."

^{156.} Ibid.

live and buy and examines purchase records from both Apple stores and authorized resellers. ¹⁵⁷ Other factors include the presence of universities, overall education, and economic conditions. The company has admitted to waiting two to three years for the perfect location, such as the San Francisco Stockton Street location, to become available. ¹⁵⁸ I found no direct evidence that access to transit is a significant consideration in Apple's retail selection decisions, although areas with existing shoppers tend to have good access to transit.

Apple had several options in selecting its second Chicago store. Apple could have chosen the Block 37 location on State Street, but the slow pace of the project may have prevented Apple's full commitment. ¹⁵⁹ Apple could have also picked from five vacant properties in Lincoln Park that met its 15,000 square foot minimum criteria. ¹⁶⁰ The property on 2214 North Lincoln Avenue with 25,000 square feet is priced at \$28 per square foot. ¹⁶¹ Instead, Apple chose to pay about \$38 per square foot for the North and Clybourn property.

The location was likely chosen because it is in a rising shopping district, close to high-end stores like Crate and Barrel. The median household income within a mile of the area in 2009 was \$80,110.162 Consumers spent \$192.486 million on entertainment (sports and recreation; TV, radio, and sound equipment; reading materials; travel; and photographic

- 157. Interview with Gary Allen, owner of ifoAppleStore.com, March 26, 2010.
- 158. Ibid.
- 159. Baub, "Apple eyeing big store on State Street."
- 160. Lincoln Park Chamber of Commerce, "Vacancy Database updated 2–10–10."
- 161. Ibid.
- 162. CoStar Property Demographics, 801 W North Ave Apple Store Demographics.

equipment) within a mile radius of the area. Additionally, certain Apple stores serve as a "brand lighthouse." The triangular site will serve as a giant Apple billboard. In the serve as a giant Apple billboard.

Apple's investment in the CTA aligns with its goals of crafting a superior retail experience. In San Francisco, Apple funded the extension of a tunnel connection between a BART station and the exit stairways; Allen acknowledges that this "change was modest, but definitely supportive of the BART system." Apple routinely fixes the exterior of their street-level stores, including removing existing sidewalk, planting trees, and moving kiosks, fire hydrants, mailboxes, benches, and other obstructions.

Apple had a strong stake in the station because its future store is adjacent to the stop. Allen speculates: "Their architect is top-notch and probably took one look at the deteriorated red brick building, the alley, and then thought — 'why am I working so hard?'" With the deal, Apple gains considerable control over the aesthetics of the whole triangle and the retail experience of its customers. Secondary benefits include increased foot traffic, good publicity, and advertising or naming rights.

Finally, the private partner must have the financial capacity and will to commit to the project. Apple, with \$40 billion in cash, had enough financial capital to commit to the project, 169 and approached the

- 163. CoStar Property Demographics, 801 W North Ave Apple Store Consumer spending.
- 164. Personal correspondence with Ian Savage, economics professor, Northwestern University, February 22, 2010.
- 165. Interview with Gary Allen, owner of ifoAppleStore.com, March 26, 2010.

166. Ibid.

167. Ibid.

168. Ibid.

169. Ibid.

CTA and the city, which indicates their interest, initiative and willingness to commit.¹⁷⁰

The Transit Agency Perspective

Bill Trumbull, general manager of real estate and asset management at the Chicago Transit Authority, states that the deal was "relatively clean in terms of the process." Apple approached the CTA for access to the public roadway that separated the station from the store. The CTA contacted the Chicago Department of Transportation (CDOT), which owns the roadway. Ellen McCormack, the city of Chicago attorney who helped draft the lease, noted that the city understood that the deal would benefit CTA riders and wouldn't hurt the city. Trumbull lists three key gains expected from the partnership. The greatest benefit is the renovation of a station that was in pretty bad shape: "We're pretty excited to have the sign improvement and the improvements on the inside." Second, the CTA will gain a "new station, a new look, new retail, and a great new neighbor across the street." Third, the CTA can gain additional revenue from a new concession space and potential increases in fares after the upgrades.

Trumbull says, "going forward, I would like to see how to incorporate this type of investment more often." The CTA has a couple TOD programs, and has on a number of occasions used TIF money on transit

- 170. Interview with Bill Trumbull, general manager of real estate and asset management, Chicago Transit Authority, February 16, 2010; personal correspondence with Ellen McCormack, attorney, city of Chicago, March 24, 2010.
- 171. Interview with Bill Trumbull general manager of real estate and asset management, Chicago Transit Authority, February 16, 2010.
- 172. Personal correspondence with Ellen McCormack, City of Chicago Attorney, March 24, 2010.
- 173. Interview with Bill Trumbull general manager of real estate and asset management, Chicago Transit Authority, February 16, 2010.

improvements, including \$1.2 million from the Berwyn TIF in Edgewater and a \$3 million TIF request for the Wilson station.¹⁷⁴

In studying this deal from the CTA's perspective, three major points can be made about the opportunities and obstacles for planning and implementing joint development projects. First, transit agencies operate with specific goals and priorities. The CTA's priority is to focus on operations and to deliver a quality service. Seeking alternative funding opportunities is secondary, and partnering with the private sector may be outside their scope. As Trumbull emphasized: "I think that's an untapped source of money, but we at the CTA have to be very careful. We are holding the public trust, because the transit system is a public asset. So, while we can look at opportunities to bring in private money, we certainly can't jeopardize the operations, frequency, or location based on where there is money available from a private investor."

Second, joint development in principle is very creative and requires an entrepreneurial attitude. In this case, Apple approached the CTA and the city. The CTA successfully seized this opportunity, however, it is worth noting that the CTA did not initiate the process and does not have any formal joint development guidelines or policies.

Third, most transit agencies have limited capacities and resources. The CTA must manage budget cuts, staff reductions, and an expansive old system. With limited resources, the CTA will prioritize operations and the delivery of a quality service rather than the pursuit of alternative financing opportunities.

Perspective of Other Key Stakeholders

I studied the perspective of other key stakeholders in the deal to illustrate opportunities and challenges to incorporating private investment in public transit. I contacted eight businesses within a block of the triangle, a

174. Ibid.

175. Ibid.

real estate brokerage firm, and the Lincoln Park Chamber of Commerce. The majority of businesses in the area are chain stores. Six managers declined to answer my questions and directed me to their corporate offices, which did not know the details about the deal or private investment in transit or refused to participate in research studies. ¹⁷⁶

An employee from one high-end store acknowledged the company's role in the community, including the company's 10 percent pre-tax sales contribution to local charities from its grand-opening weekend: "When we first opened here, I think we tried to give money to improve the CTA station. We're pretty close to the station and it is run down. This was about ten years ago . . . I think the city returned the money and took out a fee." The employee further expressed dismay about how the city drags its feet: "They weren't organized enough. I want to say that they sat on this money and didn't know what to do with it for . . . three years?" With regard to Apple's investment in the CTA, the employee did not expect significant changes from the station improvement: "We already get plenty of foot traffic already with the warm weather" and "with car traffic, people are going to use the train regardless." Nonetheless, the employee did exclaim that the deal was "fantastic" since it would make the area more attractive.

The manager of a small upscale business believed the deal was a great idea. The building was deteriorating and the improvements will liven up the area. She indicated that more businesses should step up to the plate, and big businesses can really help beautify the land. While she expressed no concerns with Apple taking the lead, she conveyed worries over the

176. Phone calls to high-end retail stores and corporate offices.

177. Personal correspondence with high-end retail employee, who wished to keep both his name and the store anonymous.

178. Ibid.

179. Ibid.

180. Ibid.

level of advertising rights. "They should only be able to do their specific advertising within a limited amount of time." When asked whether or not her business would be interested in investing in mass transit, at any capacity, she responded: "Our business is very small, and it's a very specialized business. What we sell is high end. For that reason, we will not invest in transit." 182

A real estate agent from @Properties, Chicago's leading real-estate brokerage expressed positive sentiments about the public-private partnership. She thought that Apple was truly innovative and that this is a "Chicago first." Apple selected the right demographic, because many transit riders use iPods. The agent expressed dismay that her brokerage did not think of the idea in the first place. Residents and businesses have begun calling the North and Clybourn station "the i-Stop." The agent's coworkers joked that they should have invested in transit and created "the @Stop." The agent's main concern was that the city has a "terrible track record when it comes to handling these types of deals."

Regarding surrounding real-estate values, the agent replied: "We welcome Apple to our community but it's unclear as to how property values will change specifically because Apple is here or because there are transit improvements. This is a minor factor. The larger factor is how good the economy is." The Lincoln Park Chamber of Commerce expressed a similar view: "I don't know if [the improvements to the CTA or Apple's presence] will do enough to property value to make a noticeable difference.¹⁸³

The Lincoln Park Chamber of Commerce is excited about "having an anchor business in the area" and "drawing people from all over the city." The North and Clybourn stop is the "southern gateway" to Lincoln

181. Personal correspondence with local businesswoman, who wished to be kept anonymous.

182. Ibid.

183. Personal correspondence with Padriac Swanton, director of marking and communications, Lincoln Park Chamber of Commerce, April 13, 2010.

Park, and the improved station would welcome visitors to their community. The chamber of commerce notes that if business has the means they should invest in transit or enroll in the Transit Benefit Fare program that helps employees save commuting costs.¹⁸⁴

The Potential for Joint Development in Chicago

The CTA and Apple public-private partnership at the North and Clybourn Red Line station demonstrates the potential of planning and implementing joint development projects in Chicago. This section identifies the necessary conditions for a successful project and summarizes the potential for joint development with the CTA. I will conclude with policy recommendations that can encourage the use of joint development in Chicago.

Defining a Successful Joint Development Project

To date, no study has defined a successful joint development project, although many studies have alluded to the characteristics that make joint development "a success." Being able to determine and evaluate the success of a joint development project will show why joint development should or should not be pursued.

I define a "successful" joint development project as a completed public-private partnership at, adjacent, or near a transit facility that, in the long-run, maximizes development opportunities and provides considerable benefits to the partners and the general public. The benefits will vary according to each project, but include some combination of encouraging transit usage, enhancing property values around the transit improvement, sparking new development or redevelopment, increasing revenues, creating jobs, and supporting urban planning principles that

improve urban form. A successful project is completed on schedule and on budget. As MTA's Robert Paley remarked: "A successful project is one that gets built — that's success." 185

The Necessary Conditions for Success

First, the private partner must have a considerable interest in investing in transit, the financial capacity to invest, and the will to commit to the project. The case study demonstrated that Apple's investment in transit was aligned with its primary goal of providing a superior retail experience; a deteriorating station next door to Apple's new retail store would have detracted from the experience. The Apple case study illustrated that investing in transit can be infectious, as seen with @Properties' enthusiasm.

Second, public officials must take an entrepreneurial attitude and approach. The bureaucracy of transit agencies, like most government agencies, is often at odds with the profit-seeking, entrepreneurial attitude of private entities.

Third, coordination among all parties is key. For certain deals, it is necessary to have a broad range of people with experience in development, real estate, transportation, zoning, engineering, law, planning, design, and construction. MTA transit officials say that it helps to have professional staff in different agencies who know each other and already have a good working relationship.

Fourth, the real estate market must be robust and healthy: "No matter how high the quality of an individual joint development project, no project can overcome weak local market conditions."¹⁸⁶

Finally, it is important to recognize the full range of benefits that can come from joint development. Agencies that look at joint development purely from a financial perspective have not been able to successfully

185. Interview with Robert Paley, director of transit-oriented development, the Metropolitan Transportation Authority, March 15, 2010.

promote the use of joint development.¹⁸⁷ Instead, it is helpful to think about joint development as a multi-faceted tool that supports mass transit.

Meeting the Challenges of Transit: Joint Development on the CTA

The increasing demand for public transportation and the insufficient capacity of the public sector to meet these demands requires a critical look at alternative tools that support public transit. Joint development can help reverse urban sprawl and improve urban form. To the extent that joint development promotes transit use and catalyzes development in the area, joint development has the potential to reduce automobile dependency, increase pedestrian and bicycle originated transit trips, foster safe station areas, enhance surrounding area connections to transit stations including bus access, and create mixed-use development. These benefits make transit more attractive than the automobile and address the social and cultural barriers to the use of transit. Joint development contributes to the modernization of poor transit infrastructure by improving transit facilities.

Joint development does not play a significant role in funding mass transit and cannot be used to fix the financial problems facing transit agencies. However, it is important not to underestimate the financial benefits resulting from these projects. As of 2006, the WMATA reported average annual revenues of \$15 million. With federal and state governments strapped for cash, every investment in transit matters.

Policy Recommendations

I propose the following policy recommendations to make joint development a more attractive and viable option in the future:

187. Ibid.

188. Bottigheimer, "Redefining What We Expect From Joint Development."

Adopt formal, yet flexible, joint development guidelines or policies

The Chicago Transit Authority currently lacks joint development policies or guidelines. Guidelines can aid the agency during the development process by defining the roles and responsibilities of each party involved, while allowing for a degree of flexibility to accommodate the distinct circumstances and conditions of each project. Robert Paley notes that joint development is inherently challenging and complicated because it deals with a broad range of constituencies with different interests and needs. The WMATA's joint development policies and guidelines can serve as a starting point for Chicago's policies. Last updated in February 2008, the WMATA's document outlines the program's goals and purpose, scope, major roles and responsibilities of all participants, detailed procedures, the competitive selection proposal ("RFP") process, the competitive selection qualification ("RFQ") process, and advocacy efforts. [189]

Support private sector participation through workshops

Workshops educate interested parties about the benefits of joint development, encourage public-private partnerships, and launch necessary relationships. The WMATA workshop on September 22, 2009 introduced participants to project initiation, design review and approvals, real-state permits and other requirements, construction monitoring, and project close-out under the joint development and adjacent construction program.¹⁹⁰

189. Washington Metropolitan Area Transit Authority. "WMATA Joint Development Policies and Guidelines."

190. Washington Metropolitan Area Transit Authority's Office of Joint Development & Adjacent Construction. "Workshop on Joint Development & Adjacent Construction Projects."

Explore opportunities within zoning ordinances to encourage more investment in transit

Chicago's zoning ordinances should be examined for opportunities and amended to encourage more investment in transit and support joint development projects. New York City's zoning law supports developer investment in transit through FAR bonuses and the dedication of Special Transit Districts. ¹⁹¹ Robert Paley notes that zoning for high-density areas and mixed use is desirable for joint development projects; additionally, the usual parking regulations need to be adjusted to reflect the presence of public transit. ¹⁹² The zoning regulations have to be appropriate to the kind of development that can be built.

Under Sec. 17–14–1020 of Chicago's Zoning Ordinance, "Transit Station Improvements," floor area bonuses may be granted for improvements to transit. ¹⁹³ Qualifying improvements may include new access easements or improvements to connecting passageways, mezzanines, and concourse areas. Cash contributions may also be given to the CTA for a FAR bonus.

Encourage the new transportation authorization bill to incorporate policies for joint development, value capture, public-private partnerships in transit, and transit-oriented development

SAFETEA-LU, the funding and authorization bill that governs federal transportation spending, expired as of September 30, 2009 and has since been extended. Policy makers and leaders should be encouraged to incorporate private sector participation in joint development projects in the new law.

- 191. Cervero, Transit Joint Development, 69.
- 192. Interview with Robert Paley, director of transit-oriented development, the Metropolitan Transportation Authority, March 15, 2010.
- 193. City of Chicago Department of Zoning and Land Use Planning. *Chicago Zoning Ordinance and Land Use Ordinance*.

Foster communication about joint development deals through open public forums

Open forums allow for open communication and increased trust among the transit agency, private sector and affected communities. For the CTA-Apple partnership, transit riders were suspicious about public-private deals given Chicago's poor track record with privatizing public assets. Open public forums could foster more investment and interest in future projects by other businesses.

Conclusion

With more than two thirds of the American population living in urbanized areas, there is an increasing need for comprehensive, efficient, and high-quality public transit that ensures the vitality of cities. Yet, social and cultural factors, such as America's love affair with the automobile, the poor condition of aging infrastructure, and constant financial struggles present serious challenges to the delivery of quality transit.

Joint development is an innovative public-private partnership strategy that can help resolve some of the challenges facing mass transit. It addresses social and cultural barriers and the poor condition of aging infrastructure by increasing the attractiveness of transit facilities and improving the quality of poor infrastructure. Despite the benefits and demonstrated success of joint development, the strategy has not been adequately pursued in Chicago. I argue that fostering joint development is a worthwhile goal in Chicago, as it will provide considerable benefits to the transit agency, private partners, and the general public. I found that joint development has the potential to encourage transit usage, enhance property values around the transit improvement, spark new development or redevelopment, increase revenues, and support urban-planning principles that improve urban form. The success of the CTA and Apple project at the North and Clybourn Red Line station demonstrates the potential of planning and implementing joint development projects in

Chicago. It is my hope that this public-private partnership will not be the rare exception of private investment in transit, but instead, will serve as a catalyst for similar projects in the city's future.

Mass transit is plagued with problems that no single solution can remedy. While I find that joint development cannot solve all the challenges of mass transit, it is certainly a worthwhile means to support the lifeblood of America's urbanized societies. Only through the pursuit of multiple strategies that support mass transit, including joint development, can the nation's valuable transportation network thrive for years to come.

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