A Plan for Economic Growth and Jobs

World Business Chicago

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Draft Update

WORLD BUSINESS CHICAGO

Mayor Rahm Emanuel, Chairman
Michael Sacks, Vice Chairman
Rita R. Athas, President

A Message from the Co-Chairs:

On behalf of World Business Chicago and the members of the steering committee, we are pleased to present for your consideration, the first draft of the Plan for Economic Growth and Jobs. The Plan was developed at the request of Mayor Rahm Emanuel. A critical component of the Plan is that it embodies a living process which not only allows, but depends on the input and commitment of Chicago's and the region's stakeholders. To be truly successful, therefore, the plan needs you and we respectfully seek your thoughtful review and ideas.

The Plan before you encompasses rigorous analysis of the levers that drive the city's and region's growth, clear goals, a framework for analysis, and strategies based upon Chicago's unique assets. The ultimate success of this effort will be determined by the launch and success of specific initiatives that target these strategies. This work is the product of a diverse steering committee and feedback from nearly 200 multi-sector participants, guided by a team of recognized economic development practitioners. It lays the foundation for a collaborative, inclusive and ongoing process that WBC will maintain.

Many people have contributed to the Plan's development. Whether providing thought leadership and direction, document review and comments, critical market analysis or interviews providing context to that analysis, collaboration of people and organizations made this plan possible. We would like to acknowledge the steering committee, the project management team (the Brookings Institution Metropolitan Policy Program, McKinsey & Company, Metropolis Strategies and RW Ventures), the interviewees, the WBC board and staff and City of Chicago staff for contributing to a final product that has the power to positively impact the economic growth trajectory of Chicago and the region.

In particular, we thank Mayor Emanuel for his vision and courage to honestly assess Chicago's and the region's strengths and weaknesses, seek input from a wide spectrum of stakeholders and empower that team to develop this Plan. We hope that you join with us as we go forward.

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Steering Committee

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Preface and overview

Preface

Chicago has a rich history of economic growth and transformation. Our city set a global standard in the 19th century as an industrial giant, unmatched in its freight network and manufacturing might. It developed a strong base of esteemed manufacturing firms – involved in sectors from metal fabrication and electronics, to chemicals and food processing – supported by robust supply chains and an efficient transport and logistics infrastructure. By the late 20th century, the focus of the city and the region had expanded to embrace a knowledge-based economy, while developing a highly skilled workforce. Today the Chicago region has emerged as a major hub for the headquarters of national and global corporations and the sophisticated business and professional services necessary to support them, including finance, insurance, law, information technology (IT), marketing/PR, and logistics.

The economy of Chicago and the region remains large and diverse. It boasts a strong foundation of the physical, human, technological, and institutional assets vital to a developed economy in the 21st century. Chicago is the only inland American city with a global footprint. It is the only metropolitan area in the United States that is now poised to cross the "megacity" threshold of a total population over 10 million; by 2030 it will have become the United States' third megacity. Chicago's performance on productivity, income, and wage levels has consistently exceeded U.S. averages. Its 2010 gross regional product of approximately $500 billion places the Chicago region third among U.S. metro areas after New York and Los Angeles. If the region were a country, it would be the 20th largest economy in the world. Our city and region are global in character, with a substantial and growing foreign-born population and non-stop flights to over 200 destinations throughout around the world.

The global economy is now undergoing a significant transformation. In this emerging economy, productivity and output are increasingly driven by knowledge embedded in people and technology. Market dynamics, infrastructure and human capital needs, and basic economic organization are all changing. These factors come together in metropolitan regions, which have become the key units of economic competition in the global economy. Those regions capable of deliberately building on their unique assets to increase productivity are the ones that will forge ahead in this new global environment.

If the Chicago region were a country, it would be the world's 20th largest economy.

While the economy of metropolitan Chicago has enormous competitive assets, there are challenging trends in key metrics such as output (gross metropolitan product), employment, and productivity over the past decade indicate that the economy of metropolitan Chicago is struggling to adapt to the new global economic realities.

Just as previous generations of forward-thinking Chicagoans have done, we need to undertake a purposeful, concerted effort to assure our economic prosperity in the long term. For an economy as large as that of Chicago and its region, that must be done through a coordinated, articulated economic development process that allows the public and the private sectors to align their interests and actions.

Recognizing that need, Mayor Rahm Emanuel, in his role as Chairman of World Business Chicago, commissioned this work, with a group of World Business Chicago directors serving as co-chairs. A Steering Committee made up of representatives from key constituencies of the city and metropolitan area was convened, and the professional support of The Brookings Institution Metropolitan Policy Program, which McKinsey and Co. Inc. supported by providing fact-based analysis, and of Metropolis Strategies, and RW Ventures was secured. The result of our collaborative efforts is this Plan for Economic Growth and Jobs.

This draft and the process that yielded it are intended as the start of an even broader collaboration to enhance the Chicago region's economic future. The strategies we recommend here have been derived from rigorous fact-based analyses and discussions with nearly 200 stakeholders around the city and region. WBC and its Steering Committee welcome further contributions from interested parties. We hope to oversee an ongoing refinement of this Plan as it evolves, and intend to provide for its maintenance and its execution.

The Plan for Economic Growth and Jobs provides a framework within which greater Chicago can define priorities and undertake an integrated and unified agenda for economic growth. It is designed to be a fact-based, pragmatic, and actionable document that benefits not just one but all sections of society in the Chicago region. Recognizing that economic development today has to focus on regional issues, the Mayor directed that the Plan start with a focus on the city and look outward, facilitating partnership to leverage assets and accelerate growth for the entire metropolitan region.[1] The economic fate of the central city is inextricably linked to that of the surrounding suburbs (see sidebar, "Cities, Suburbs, and Neighborhoods," in chapter 1). The market analysis and the strategies presented in the Plan for Economic Growth and Jobs cover the metropolitan area as a whole. We present them for the consideration of others around the metropolitan area, and for their active collaboration.

This first draft of the Plan for Economic Growth and Jobs is intended to embody a living process, and to mark the beginning of a coordinated effort to assess, manage and grow our economy. It is designed to give direction to the vital discussion about how to make the most of the city's and the region's existing assets, and how to foster the new assets we need to flourish in the economy of the future. What we seek to provide with this Plan is a clear set of goals for economic growth, an overarching framework for research and analysis, and an initial set of strategies for which actionable initiatives can be developed.

An important element of the Mayor's directive is that the Plan be inclusive, fostering growth not only in the central business district, but also throughout the region; and not only for large corporations, but also for small- and medium-sized enterprises (SMEs). In that context, the Plan will have an outsized impact in enabling the accelerated growth of women- and minority-owned enterprises (MBE/WBEs). The many strategies that aim to enhance entrepreneurship and innovation, to reduce the time and cost to market, and to promote a transparent business environment will benefit MBE/WBEs throughout the city and the region.

Clearly, strong schools, safe streets and stable state and local finances are critical for successful economic development and sustained growth. The Plan acknowledges this, but the Plan does not diminish the need for comprehensive planning with regard to poverty, education, housing, public health, safety, transportation, the environment, community development, and overall quality of life. In that sense, it is a focused Plan for Economic Growth and Jobs.

While the Plan for Economic Growth and Jobs will contribute to increased opportunity for individuals and more investment for communities, it is not a plan for poverty elimination and community development. We recognize that developing and deploying the assets of underserved people and places is critical to sustainable economic growth, and the Plan's strategies and initiatives are designed to be inclusive.

Vital to the success of economic development are a number of fundamental preconditions, including strong schools, safe streets and stable finances. A high-performing public education system from early childhood to the postsecondary level, a safe and livable environment, and a stable fiscal situation at the state and local level are overarching needs that city, region and state must strive to provide. We briefly summarize these and other preconditions in chapter 4, "Impact and Risks." These issues, while critical to the success

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[1] *The Plan recognizes that Chicago and the rest of the 14-county metropolitan area are economically co-dependent and together form a single economy. The scope of analysis is largely regional, and while many of the initial interventions are City-based, they aim to leverage assets and lift economic growth for the broader region (see sidebar in chapter 1, "Cities, Suburbs, and Neighborhoods").*

of the Plan, are beyond its scope and are being addressed by other broader efforts. In developing the Plan for Economic Growth and Jobs, we focused on those aspects of the region that have the most direct impact on improving our gross regional product (GRP), employment, and wages.

The Plan incorporates as much as possible of the best past and current work on the determinants and mechanics of economic growth. It was formulated after a thorough survey of existing efforts, and its strategies are meant to encompass many existing initiatives, some of which are identified within the document.

Overview

The Plan is divided into five chapters:

- *Chapter 1* describes the foundations for growth that are necessary in order for metropolitan economies to move toward and embrace the "next economy." Five market levers are identified here as drivers of growth and lenses for analysis; they form the basis for evaluating assets, challenges, and opportunities.
- *Chapter 2* is a description of metropolitan Chicago's economy. It measures how well we are doing in comparison with past performance, national performance, and the performance of peer regions. It also analyzes the character of our economy by examining its most promising sectors; the status of our human capital; our capacity for innovation; and how our physical and virtual infrastructure, and our public and civic institutions, enable future growth.
- *Chapter 3* identifies 10 economic growth strategies for the city and the region derived from the market analysis described in Chapter 2. These strategies reflect the consensus of the Steering Committee as to the most important arenas for action at this time.
- *Chapter 4* summarizes the opportunity that can be realized by making significant progress on all 10 strategies. It also identifies key risks that might prevent successful implementation of these strategies.
- *Chapter 5* outlines the institutional and organizational structures that are needed to support the realization of these strategies going forward.

The Plan for Economic Growth and Jobs fully recognizes that our economy extends beyond governmental boundaries. The broad strategies presented in this Plan are ambitious. Its goals reach far beyond the City's limits. Cooperative and collaborative action throughout the region will be vital to growing our shared economy, and is a key element of the Plan's implementation.

Chicago has a great tradition of leaders who take action to overcome challenges and achieve progress – from rebuilding after the Great Fire to implementing Daniel Burnham's Plan of Chicago to reversing the flow of the Chicago River. The economic challenges facing Chicago today require similar energy and innovation. If we act strategically now, we can reverse current trends and secure our competitive position for the future. The Chicago metropolitan area can become a true center of gravity for growth in key sectors, it can extend its position as a regional "magnet" for the Midwest, and most importantly, it can enhance its role as a truly global city – an international hub for businesses, people, goods and ideas – in an increasingly dynamic global economy.

1. Foundations for Economic Growth Planning

Developing a Plan for Economic Growth and Jobs requires an understanding of the underlying economic dynamics and trends that drive the city's and region's economy.[2]

What are the Drivers of the "Next Economy?"

The global economy is currently undergoing a fundamental transformation. Recent changes – the housing and financial crises, massive shifts in the manufacturing sector, and the increasing importance of environmental sustainability and limited resources, among others – are not temporary departures from past trends, after which everything will return to "normal." Rather, our society is undergoing a period of technology-driven change that is not incremental and linear, but is instead the result of a restructuring of global economic activity.

The Next Economy

A decade into the third millennium, certain basic characteristics of sustainable success in developed economies have become clear. Chief among these are knowledge, dynamism, and global reach.

World markets are shifting towards knowledge-based goods and services.[3] Whether it is embedded in people or in advanced technologies, knowledge increasingly drives productivity and economic growth. Knowledge-related service sectors comprise nearly 75% of the economic output of developed economies today.[4] Knowledge-based innovations are proliferating, and entirely new sectors are emerging. "Big data," for example, is an emergent trend based on previously unimaginable quantities of new information and datasets across sectors. This trend promises to transform industries, as the volume of global data generated is expected to grow by 40% annually.[5]

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2 *This section excerpts and draws heavily on the following sources, which also provide extensive reviews of the relevant literature: Mark Muro and Robert Weissbourd, "Metropolitan Business Plans: A New Approach to Economic Growth" (Brookings Institution, 2011); Kosarko and Weissbourd, "Economic Impacts of GO TO 2040," chapter 2 (Chicago Community Trust, 2011); Kosarko, Weissbourd, Wolman, Sarzynski, Levy and Hincapie, "Implementing Regionalism: Connecting Emerging Theory and Practice to Inform Economic Development" (Surdna Foundation, pending publication); see also, Michael Spence and Sandile Hlatshwayo, "The Evolving Structure of the American Economy and the Employment Challenge" (Council on Foreign Relations, 2011).*

3 *These changes are often collectively referred to as the "knowledge economy," which encompasses the increasing importance of information and knowledge resources (a) as inputs to production, (b) in the production and market process, and (c) as products and services. See discussion in Robert Weissbourd and Christopher Berry, The Changing Dynamics of Urban America (Chicago: CEOs for Cities, 2004), 24-27; Matthew Drennan, The Information Economy and American Cities (Baltimore: Johns Hopkins University Press, 2002); and J. Houghton and P. Sheehan, A Primer on the Knowledge Economy (Melbourne City, Australia: Center for Strategic Economic Studies, Victoria University, 2000).*

4 *McKinsey Global Institute, analysis of Global Insight and Economist data. Knowledge-related service sectors are defined as including business services, local services, and infrastructure. "Goods" sectors (non-knowledge-related) include manufacturing and other resource-intensive industries such as agriculture, metals, paper, etc. Data from Germany, Japan, and the United States were used as a proxy for developed countries. The Federal Reserve Board revealed several years ago that U.S. GNP quintupled in the last 50 years, while its physical weight barely increased. "Greenspan Weighs Evidence and Finds a Lighter Economy," Wall Street Journal, <http://anasazi.umsl.edu/FIN455/NonLinear/GreenspanWeighs.htm>). Greenspan's point is that intangible assets are a much greater part of the economy's output today. Intangible assets inherently entail more knowledge and information resources in their creation and composition.*

5 *"Big Data: The Next Frontier for Innovation, Competition, and Productivity", McKinsey Global Institute, 2011.*

The economic landscape has also become much more dynamic, as success increasingly demands flexible production and rapid adaptation. Entire networks of firms, institutions, and individuals have to be brought into play to redeploy economic assets into promising products, services, and sectors. Firms and industries emerge, develop, and continually redefine themselves based on changing market conditions, and this process of transformation is occurring at much faster speeds than in the past. Consider, for example, that the companies that made up the S&P index in the 1920s would remain on the list for an average of 65 years; by the late 1990s, the average firm spent only 10 years on the S&P 500.[6]

The economic outlook has also become more global in nature. The success of firms and regions today is increasingly determined by how much access they have to global markets, and how well they address increasing export demand from emerging markets and the demand for more sustainable goods, services, and solutions.

The Role of Metropolitan Regions

The knowledge-based, dynamic, and global nature of the "next economy" favors metropolitan regional economies.

- **Metropolitan regions are the primary economic units competing in the global economy.** The nation's economic assets are concentrated in metropolitan areas, which play a vastly disproportionate role in creating economic value.[7] The geographic proximity of key economic assets and actors enhances their individual and collective productivity[8] by reducing transaction costs and increasing the interactions that generate innovation.[9] Skilled people and firms located in metropolitan areas have higher productivity and outputs than their peers located outside them.[10] For these reasons, metropolitan regions are becoming the primary competitive units of the global economy.[11]
- **Regional economies are specialized, complex, and dynamic.** Every metropolitan area has a specific mix of assets, and those assets interact in a way that is unique to that locality and crucial to its economic performance[12] As a result, regions are becoming increasingly differentiated and specialized.

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6 *Manyika, Lund, and Auguste, "From the Ashes: The Most Dynamic Economies Rely on Creative Destruction to Grow" Newsweek (August 16, 2010).*

7 *See Alan Berube, "MetroNation: How U.S. Metropolitan Areas Fuel American Prosperity" (Brookings Institution, 2007).*

8 *See Clark, Feldman, and Gertler, ed., The Oxford Handbook of Economic Geography (OUP, 2000).*

9 *From an economist's point of view, the reason for the very existence of cities, and their surrounding economic regions, is to reduce the transportation costs of goods, people, and ideas. See Edward L. Glaeser, "Are Cities Dying?" (Journal of Economic Perspectives 12 [Spring 1998): 140).*

10 *See Christopher Wheeler, "Cities and the Growth of Wages Among Young Workers: Evidence from the NLSY" (Working Paper 2005-055A, Federal Reserve Bank of St. Louis, 2005). Wheeler, for example, finds that a one-standard-deviation increase in log population or density of a metropolitan area is accompanied by an approximately 0.2% increase in the annual rate of within-job wage growth, and an average 1% increase in wages when workers move between jobs.*

11 *Research indicates that, in the context of the global economy, regions are large enough to compete internationally, and small enough to benefit from network and agglomeration economies. Regions are large enough to offer economies of scale in markets and business networks that are needed to compete in international markets, and small enough to provide the economic benefits of geographic proximity of human capital, firms and related institutions (see Manuel Pastor Jr. et al., Regions That Work: How Cities and Suburbs Can Grow Together [University of Minnesota Press, 2000]; Pierre-Paul Proulx, "Cities, Regions, and Economic Integration in North America," in North American Linkages: Opportunities and Challenges for Canada, ed. Richard Harris [University of Calgary Press, 2003]; and Peter Calthorpe and William Fulton, The Regional City [Washington, D.C.: Island Press, 2001]).*

12 *See Kosarko and Weissbourd, "Economic Impacts of GO TO 2040," chapter 2 (Chicago Community Trust, 2011); Kosarko, Weissbourd, Wolman, Sarzynski, Levy and Hincapie, "Implementing Regionalism: Connecting Emerging Theory and Practice to Inform Economic Development" (Surdna Foundation, pending publication);*

- **The growth trajectories of regional economies are diverging.** High-performing regions will tend to pull further ahead of their competitors and lagging regions will tend to fall further behind. Small changes in direction can make a big difference.[13]

Cities, Suburbs, and Neighborhoods

Since marketplaces operate over varying geographies, planning economic growth requires a focus on the economy first, and the geography second. Good planning has to reflect the boundaries of economic activity, not the political boundaries that separate cities, suburbs or even states. While metropolitan areas as a whole are generally the geographic setting for economic synergy, planning must take careful account of the neighborhoods, cities, and suburbs that comprise the whole region. Two points are especially important: 1) all neighborhoods, cities and suburbs have key assets whose deployment bears on increased productivity and economic growth; and 2) the economic fates of all neighborhoods, cities, suburbs and the metropolitan area are inextricably linked.

The economic growth of cities and their suburbs is highly interdependent, because these places are largely parts of the same economy. They share labor and housing markets; business-to-business relationships and supply chains;[14] infrastructure and commuting patterns;[15] cultural, recreational, retail, and other amenities;[16] and anchor institutions, such as hospitals and universities.[17] The evidence suggests that, overall, regions with the least internal inequity do best, because they better deploy their assets. That insight drives home how important it is for the Plan to be inclusive of assets across all neighborhoods.

The Plan for Economic Growth and Jobs recognizes that Chicago and the surrounding communities constitute an economically co-dependent metropolitan area. Since the Plan focuses on economic growth, its analysis is largely regional in scope. Yet the strategies it proposes are targeted to the geography of particular economic marketplaces. In some cases the strategies seek to link neighborhood assets to particular economic activity in the city; others are focused on assets, such as industry clusters, that extend across the entire region. The Plan thus "starts with Chicago and looks outward."

Robert Weissbourd and Christopher Berry, "Changing Dynamics of Urban America" (Chicago: RW Ventures for CEOs for Cities, 2004).

13 *New growth theory, in particular, holds that concentrations of knowledge factors – such as high human capital, information technologies, and information sector firms – build upon themselves. This process results in increasing rather than diminishing returns, so that the places that get ahead tend to keep getting further ahead. See generally Joseph Cortright, "New Growth Theory, Technology and Learning: A Practitioner's Guide," Reviews of Economic Development Literature and Practice 4 (2001), especially 10-12; and Robert Weissbourd and Christopher Berry, The Changing Dynamics of Urban America (Chicago: CEOs for Cities, 2004).*

14 *See, e.g., Alex Schwartz, "Corporate Service Linkages in Large Metropolitan Areas: A Study of New York, Los Angeles, and Chicago," Urban Affairs Quarterly 28 (1992): 276-296.*

15 *See, e.g., Joseph Persky, Elliot Sclar and Wim Wiewel, "Does America Need Cities? An Urban Investment Strategy for National Prosperity" (Economic Policy Institute, 1991).*

16 *Persky et al., "Does America Need Cities?"*

17 *See, e.g., Keith Ihlanfeldt, "The Importance of the Central City to the National and Regional Economy: A Review of the Arguments and Empirical Evidence," Cityscape 1 (June 1995); and Robert Weissbourd and Christopher Berry, "The Changing Dynamics of Urban America," CEOs for Cities, 2004, 76.*

Implications for Regional Economic Development

Why undertake a Plan for Economic Growth and Jobs? What are its essential characteristics?

The nature of the "next economy" has major implications for the practice of regional economic development.

- Regions must build from their own unique and distinctive assets; one size does not fit all.
- Strategies must be comprehensive and integrated,
- To plan properly for economic growth, a region's institutions have to be proactively working together toward well-defined goals.
- Regions need transformative investments to advance into the next economy.

Traditional economic development strategies are no longer enough to move the needle on growth. Approaches that do not build on a region's specialized assets cannot adequately take the fundamental restructuring of the global economy into account. One-time tax incentives, broad-based branding efforts, or competitive "smokestack chasing" are of moderate lasting use. Truly transformative investments, by contrast, can assert and redefine the region's identity and dynamics, making it the place where particular "next economy" sectors, firms, and workers flourish.

In short, each region must examine its assets, challenges, and opportunities in the context of the changing global environment and reorient its economic trajectory to achieve sustainable economic growth.

In developing this Plan, World Business Chicago and the Steering Committee took a comprehensive look at successful models of economic development around the world. The broad set of global examples studied includes, for example, the *Mittelstand* regions in Germany, the national economic growth efforts of Singapore and Malaysia, and similar efforts in U.S. metropolitan areas, such as Seattle and Minneapolis-St. Paul. Recognizing that the determinants of economic growth are region-specific, these models have not been copied directly; rather, their relevant factors for success have been incorporated in the overall approach and the key principles.

Economic Growth Stories in Other Regions

Dortmund, Germany: The region evolved from a legacy of coal and steel manufacturing into an economy focused on advanced technologies (e.g., microsystems), services (e.g., IT), and logistics – creating 50,000 new jobs in the last decade.[18]

Malaysia: The national **Economic Transformation Programme (ETP)** has set a clear vision to foster a high-income nation by 2020. Implementation has involved deep partnerships between the public and private sectors and, importantly, has emphasized from the start that performance metrics be transparent and that the public be involved.[19]

Wolfsburg, Germany: The **Autovision Initiative,** a public-private partnership with Volkswagen, reduced unemployment from 17% to 8%between 1997 and 2004 by focusing on six industry clusters, strategically investing in innovation for start-ups, and linking small and medium-sized businesses to suppliers and resources.[20]

Shenzhen, China's Special Economic Zone, created a business-friendly environment by focusing on attracting foreign direct investment and investing in supporting infrastructure. The result for Shenzhen has been an average annual industrial growth of 69% in its first decade, making it one of the fastest growing urban economies in the world.[21]

The University of Wisconsin's University Research Park is a nonprofit entity that fosters start-ups by providing such resources as real estate spaces, mentorship programs, career services, and access to research and development (R&D), It currently supports 126 companies that employ more than 3,500 people.[22]

Singapore has transformed its economy over past decades by targeting investment in emerging "sunrise" industries and R&D, and providing a streamlined business environment, earning it the title of "Easiest place to do business."[23]

Puget Sound's Building Efficiency and Technology Innovation (BETI) initiative aims to catalyze growth in the region's energy efficiency technology cluster as part of a broader metropolitan economic growth plan.[24]

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18 *Dortmund Project, German Federal Employment Agency.*

19 *"Jump-starting Malaysia's growth: An interview with Idris Jala," McKinsey Quarterly, October 2011; http://www.pemandu.gov.my*

20 *CSR Europe.*

21 *China Daily: http://www.chinadaily.com.cn/usa/business/2011-06/07/content_12653458.htm; New York Times: http://www.nytimes.com/1991/05/23/business/china-revives-its-test-of-capitalism.html*

22 *http://universityresearchpark.org/*

23 *Economic Development Board Singapore; ranking from Doing Business 2011 report, World Bank.*

24 *"Innovation meets Demonstration: A prospectus for catalyzing growth in the Puget Sound's energy efficiency technology cluster" (Brookings Institution Metropolitan Policy Program, 2011).*

Guiding Principles

The lessons learned from current best practices led to a planning approach that differs in several critical respects from traditional economic development exercises, and a number of guiding principles were articulated.

First, the Plan was designed to be *fact-based, data-driven and market-disciplined.* Developing a plan that works entails:

- Undertaking an analytically rigorous market analysis to understand how the region's assets can best drive economic performance;
- Deriving a set of strategies that a) arise directly from this market analysis and are geared to the particular strengths, challenges, and opportunities it identifies; and b) combine to create an integrated regional vision;
- Assessing – through an apolitical lens – the array of relevant initiatives already underway in the region, and identifying opportunities to align, expand, and improve them;
- Laying out explicit strategies that can drive growth from which specific, results-oriented initiatives can be derived; and
- Measuring and revising the process in recognition of the fact that economic development is an ongoing enterprise.

Second, the Plan embodies *a living process*. To succeed, the market analysis must be continually updated and deepened to keep track of potential opportunities. Strategies need to be evaluated on a regular basis to ensure they remain aligned with regional conditions. All initiatives targeted to execute on strategies should be monitored to gauge their effectiveness and enable continual adaptation and improvement, as well as to identify new opportunities.

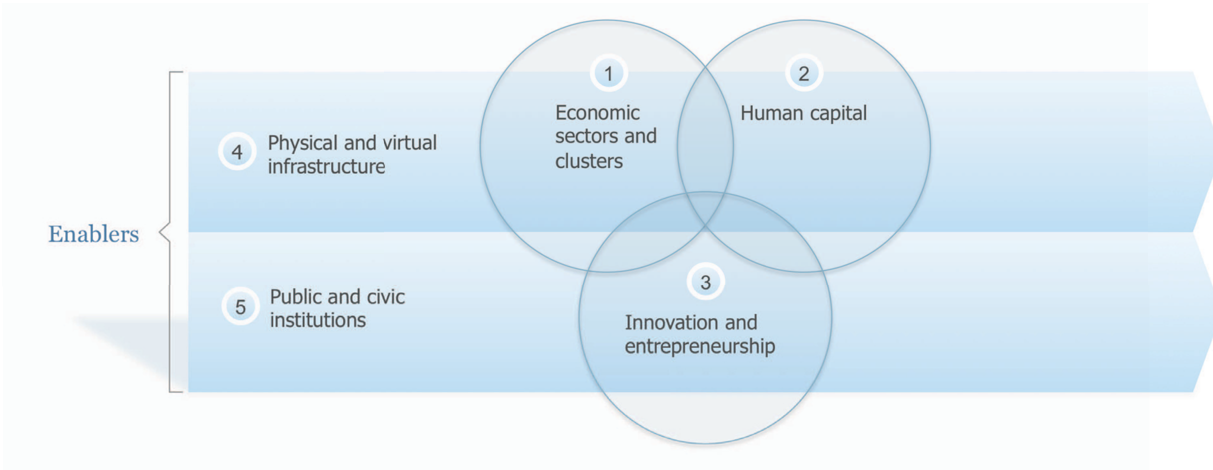
Third, the process of developing and implementing the Plan is *inclusive, collaborative, and transparent.* To assure that the Plan is properly grounded, it must be developed with the involvement of a diverse set of informed stakeholders and subject-area experts from the public, private, and civic sectors. Similarly, implementation of the plan cannot be the purview of a single organization or agency. Individuals and organizations with particular expertise and experience related to the strategies identified in the plan need to be deeply engaged to shape implementation efforts and continually identify and design new initiatives.

Market Levers for Driving Growth: A Framework for Analysis

Five market levers can be used to determine how well a region's assets can drive increased productivity and jobs, and each serves as a framework or lens for analysis. The market analysis aims to understand how these levers position Chicago and the metropolitan region with regard to competitors, and how they might influence future growth (Exhibit 1).

Exhibit 1

Framework for Analysis: 5 Market Levers that Drive Economic Growth



- **Economic sectors and clusters.** These are defined as concentrations of economic activity – firms, functions, occupations, and related institutions – that drive the efficiency and productivity of the regional economy by reducing transaction costs among buyers, suppliers, and customers; enabling shared labor and other inputs across firms; facilitating both the explicit and indirect exchange of knowledge; and enhancing the region's innovative capacity.[25]
- **Human capital.** Human capital is the single most important input for economic growth, particularly in the knowledge economy. To have an impact, however, it must be properly *deployed* into jobs that best match workers' skills and education. Getting this right requires paying attention not just to education and training, but also to job creation in growing sectors (see "Economic sectors and clusters" paragraph above), matching of labor supply and demand, and enhanced labor market efficiency.[26]
- **Innovation and entrepreneurship.** The ability to innovate is the core driver of increasing productivity, and is a growing priority in economic development policy and practice.[27] A knowledge-

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25 *Marshall, Principles of Economics (1890); J. Vernon Henderson, "Marshall's Scale Economies," Journal of Urban Economics 53 (2003): 1-28; Gilles Duranton and Diego Puga, "From Sectoral to Functional Urban Specialization" (NBER Working Paper 9112, 2002); Michael Porter, Competitive Advantage: Creating and Sustaining Superior Performance (Free Press, 1998). For a general review, see Joseph Cortright, Making Sense of Clusters: Regional Competitiveness and Economic Development (Brookings Institution, March 2006). On agglomeration economies, see Edward Glaeser, ed., Agglomeration Economies (University of Chicago Press, 2010).*

26 *Christopher Berry, Riccardo Bodini, and Robert Weissbourd, Grads and Fads: The Dynamics of Human Capital Location, (CEOs for Cities, August 2005).); Michael Storper and Allen Scott, Rethinking Human Capital, Creativity and Urban Growth, Journal of Economic Geography 9 (2009) pp. 147–167. For a review of the literature, see Paul D. Gottlieb and Michael Fogarty, "Educational Attainment and Metropolitan Growth," Economic Development Quarterly 17 (2003): 325-36. See also Edward Denison, Trends in American Economic Growth, 1929-82 (Brookings Institution, 1985); Paul Romer, "Endogenous Technological Change," Journal of Political Economy 98 (October 1990): S71-S102; Vijay Mathur, "Human Capital-Based Strategy for Regional Economic Development," Economic Development Quarterly 13 (August, 1999): 203-16; Edward Glaeser and Janet Kohlhase, "Cities, Regions and the Decline of Transport Costs" (Harvard Institute of Economic Research, 2003).*

27 *G.M. Grossman, and E. Helpman, Innovation and Growth in the Global Economy (MIT Press, 1991); Joseph Schumpeter, Capitalism, Socialism, and Democracy (Harper Brothers, 1947); Paul M. Romer, "Increasing Returns and Long Run Growth," Journal of Political Economy 94 (1986); Robert Atkinson and D. Audretsch, "Economic Doctrines and Policy Differences: Has the Washington Policy Debate Been Asking the Wrong Questions?" (Information Technology and Innovation Foundation, 2008).*

based economy, heightened competition in globalized markets, and the quickening pace of change make continual innovation, commercialization, and business creation imperative for economic success.

- **Physical and virtual infrastructure.** The relative location of businesses, suppliers, workers, and consumers within a region – and the physical and virtual infrastructure connecting them – is of vital importance. It determines transportation costs and the transmission of ideas across space, and it influences many economic benefits of agglomeration, such as shared labor pools and knowledge spillovers.[28] Mixed-use communities with excellent transportation connections are best positioned to flourish in the next economy.
- **Public and civic institutions.** Government shapes and enables market activity, and provides critical public goods that enhance firms' productivity and efficiency, from roads to education. Along with civic, private-sector, and cross-sector institutions, it also creates the environment and culture that informs regional economies. Public and civic institutions that work collaboratively, embrace transparency, and provide public services efficiently can enhance regional competitiveness by making it easier for businesses to thrive.[29] Public and civic institutional actors need to (i) coordinate and cooperate, with streamlined services and efficient operations; (ii) embrace transparency in a welcoming climate that encourages business and labor engagement in civic institutions and networks; (iii) provide a strong tax value proposition that provides businesses and households with high value in the public goods and services they receive in return for their tax dollars, such as infrastructure, education, and public safety; and (iv) continually adapt to changing economic conditions to best support the growth.

Taken together, these market levers can determine the regional economy's performance. Analyzing the local assets and dynamics related to each, as well as their interactions with one another, helps us identify the strategies that will best transform the regional economy and enable metropolitan Chicago to lead in the next economy.

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[28] *See, for example, Jackie Cutsinger, George Galster, Royce Hanson and Doug Towns, "Verifying the Multi-Dimensional Nature of Metropolitan Land Use" Journal of Urban Affairs 27 (Aug 2005): 235-59; William T. Bogart, Don't Call it Sprawl (Cambridge University Press, 2006); and Keith R. Ihlanfeldt, "The Geography of Economic and Social Opportunity in Metropolitan Areas" in A. Altshuler, W. Morrill, H. Wolman, and F. Mitchell, ed., Governance and Opportunity in Metropolitan America (National Academy Press, 1999); Andrea Sarzynski and Alice Levy, "Spatial Efficiency and Regional Prosperity: A Literature Review and Policy Discussion." Working Paper #41 (Washington, DC: George Washington Institute of Public Policy, 2010).*

[29] *See among others Christopher Berry, Imperfect Union: Representation and Taxation in Multilevel Governments (Cambridge University Press, 2009); Douglas North, Institutions, Institutional Change, and Economic Performance (Cambridge University Press, 1990.); Richard Nelson, ed., The Limits of Market Organization (Russell Sage Foundation, 2005); Robert Weissbourd, "Into the Economic Mainstream: A Discussion Paper on Bipartisan Policies for Inclusive Economic Growth," prepared for Opportunity Finance Network and CFED (August 2006), available at: http://rwventures.com/publications/downloads/Distribution%20Draft%20IEM%20Paper%208-6-06%20rw.pdf; Remy Prud'homme, "Dangers of Decentralization," World Bank Research Observer (World Bank, 1995); and Vincent Ostrom, Charles Tiebout, and Richard Warren, "The Organization of Government in Metropolitan Areas: A Theoretical Inquiry," American Political Science Review 55 (1961).*

2. Chicago's Economy: Market Analysis

This chapter summarizes the market analysis, starting with a high-level overview and then delving into each of the key market levers.

Overview: The Economy's Current Status and Performance

The Chicago metropolitan economy is large and diverse. With 2010 gross regional product (GRP) of approximately $500 billion, the region ranks third among U.S. metro areas; if it were a country, it would have the 20th largest economy in the world. The region has consistently out-performed the U.S. average and many peers on productivity, income, and wages. It is the only inland American metropolitan area with a global footprint, and the only metro area in the developed world that is projected to grow into a new "megacity" region by 2030.[30]

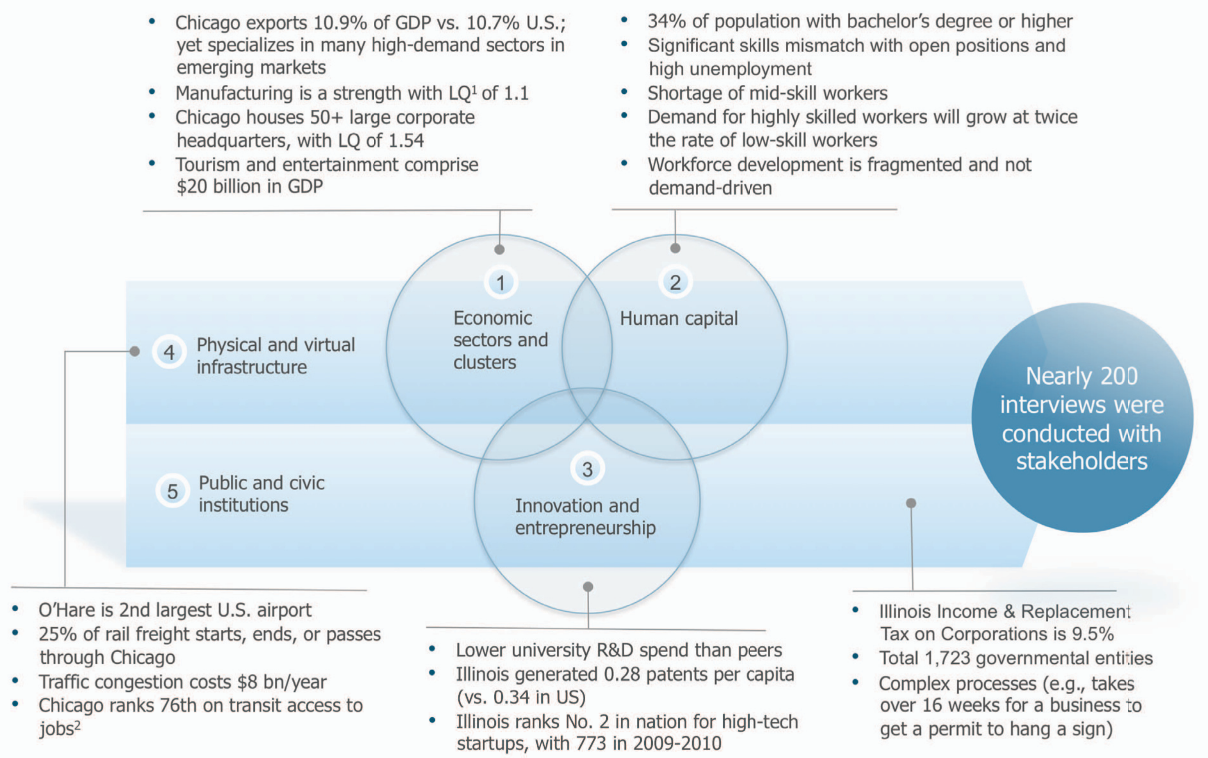
The region competes ably with other top-tier global metropolitan areas thanks to a strong foundation of economic assets, including its central U.S. location, extensive transportation network, well-educated workers, world-class universities, cutting-edge research institutions, and a civic-minded business community. Its historical strengths in manufacturing, transportation, and trade remain a significant part of the industrial base, while corporate headquarters and an array of "knowledge economy" industries (e.g., IT, scientific, and technical services) and advanced business services (e.g., finance, law, accounting) have grown in prominence in recent decades.

A sampling of facts that surfaced across the market levers is displayed in Exhibit 2.

[30] *A "megacity" is defined as a metropolitan area with a population of over 10 million; besides Chicago, all other future "megacities" are expected to emerge in the developing world (see "Urban world: Mapping the economic power of cities," McKinsey Global Institute, March 2011).*

Exhibit 2

Market Analysis Across the 5 Levers

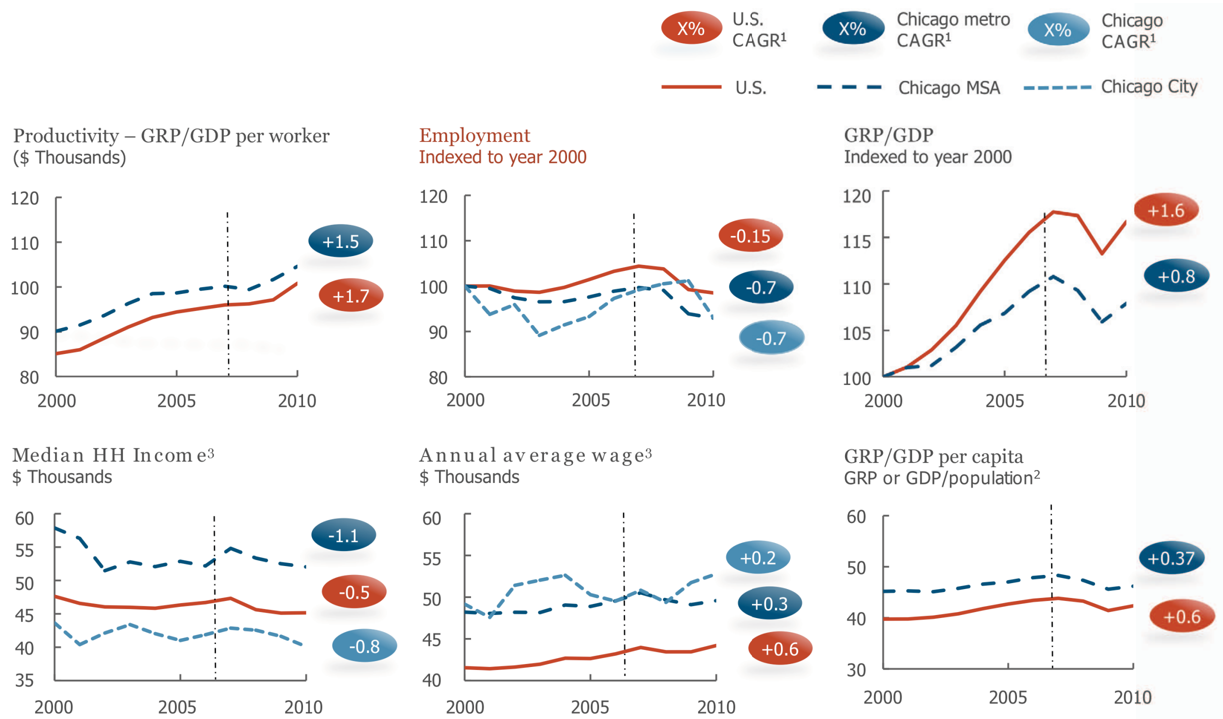


1 Location quotient (LQ) = share of Chicago employment in industry, divided by share of total U.S. employment in industry. An LQ of 1.0 indicates industry share of local economy equals that of national economy. An LQ higher than 1.0 indicates relative local specialization; an LQ below 1.0 indicates a lack of local specialization; 2 Measured as how many people are covered by transit and how many jobs they can reach (relevant to their skill set) within a reasonable amount of time. Ranking of top 100 metropolitan areas in U.S.

Despite the regional economy's size and diversity, recent trends suggest that it has lost momentum over the last decade, and point to a challenging future. On key measures of economic activity, the region's performance has begun to lag that of the nation overall and of other large metropolitan areas (Exhibit 3).

Exhibit 3

Chicago has Seen Slowing Growth in the Past Decade



- Annual GRP growth at half U.S. rate on average
- Productivity advantage compared to U.S. average, but shrinking
- Sharper employment decline than U.S. average

1 CAGRs for employment, GRP (Gross Regional Product), and GDP are based on absolutes; 2 GDP per capita calculated using year end population totals; 3 Household income and annual wage indexed to 2005 CPI to adjust for the impact of inflation

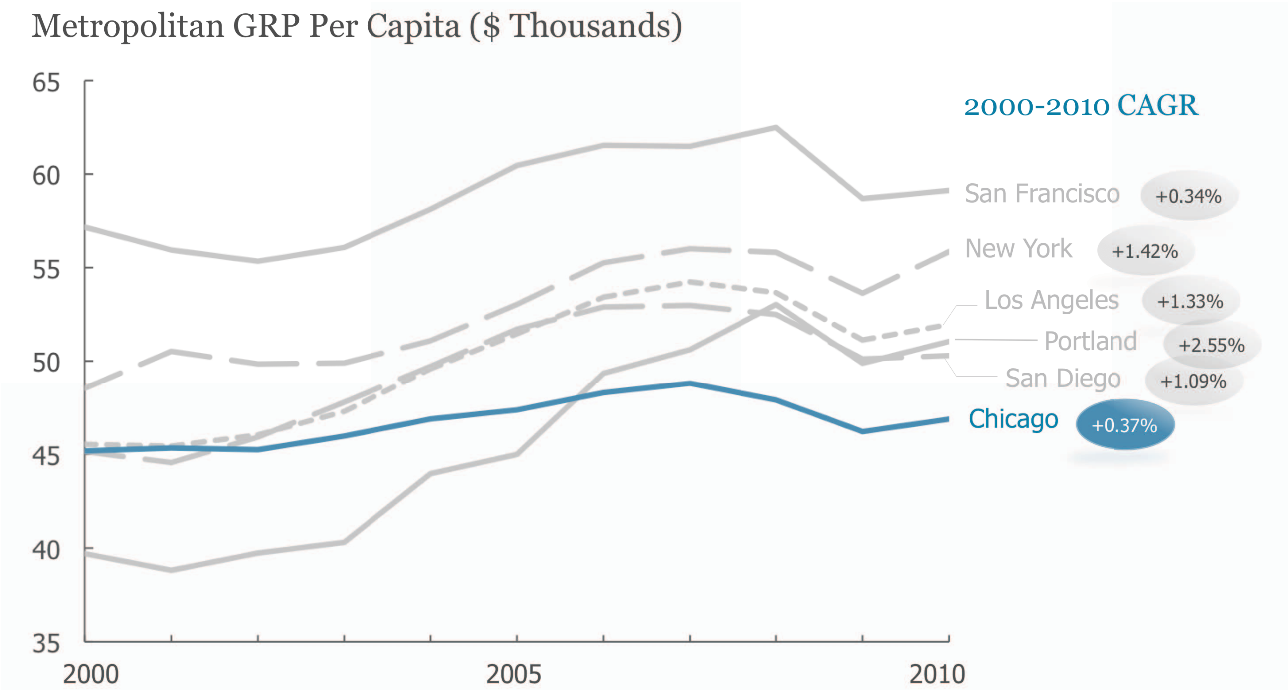
Source: Brookings, Moody's Analytics, BLS analysis

Annual GRP for the Chicago region has grown at just half of the U.S. rate (0.8% vs. 1.6%) during the last decade, and GRP per capita growth has been much slower than that of other major U.S. cities, such as New York and Los Angeles (Exhibit 4). Net population growth in the metro area in the past decade has been slow – just 0.4% annually, below half the U.S. average rate of 0.9% – and the City of Chicago has seen a net drop of 200,000 people in the past decade (mostly to the surrounding suburbs). Employment in Chicago (both the metro area and the City) declined much more steeply on an annual basis than for the U.S. as a whole (-0.7% vs. -0.15%), and the Chicago region's historic productivity advantage over the U.S. average has begun to erode in recent years (Exhibit 5). In short, Chicago's economy has faced serious decline over the past decade, relative to the nation as a whole as well as peer regions. While the Chicago region has enormous competitive assets, it faces a significant challenge to reverse trends that have been moving in the wrong direction for the past decade as it struggles to adapt to new global economic realities.

With a 2010 gross regional product of approximately $500 billion, the Chicago region ranks third among U.S. metro areas.

Exhibit 4

Chicago's Regional Growth has Been Significantly Slower than Other Large Metro Areas

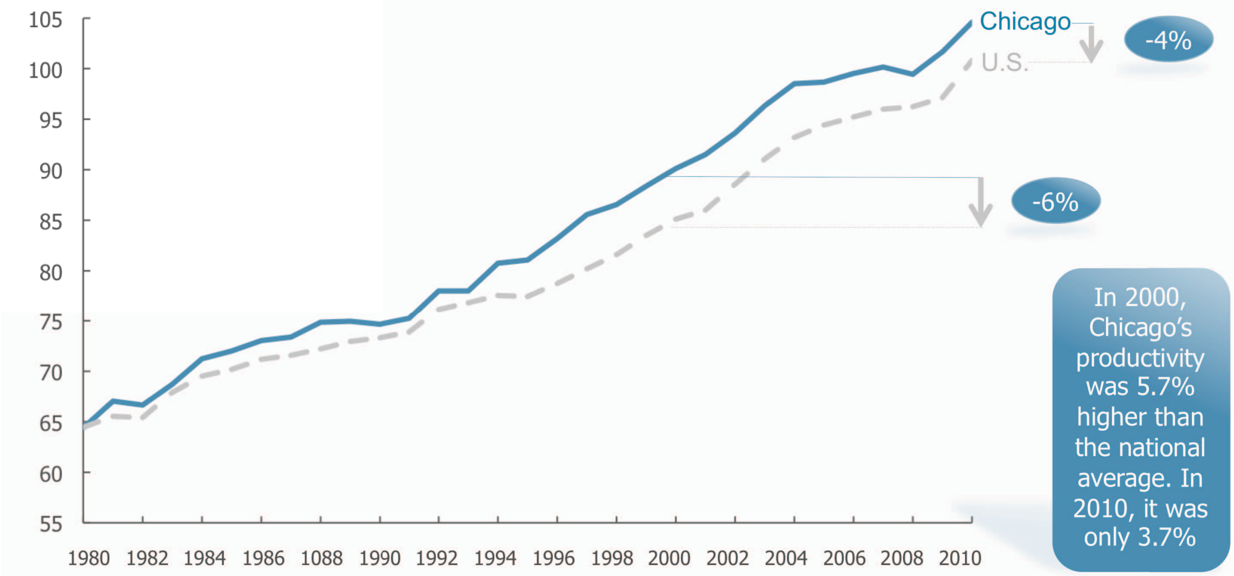


Source: Moody's Analytics

Exhibit 5

Chicago's Historical Productivity Advantage Over the National Average has Lately Been Narrowing

Overall Productivity[1] 1980-2010



1 Productivity = Real GRP/Employment. GRP in 2005 adjusted dollars
Source: Bureau of Economic Analysis; Bureau of Labor Statistics; Moody's Analytics

Economic Sectors And Clusters[31]

The Chicago region's industrial base is exceptionally diverse, with no single sector[32] comprising more than 13% of total employment. Considering broad categories in aggregate, metropolitan Chicago's largest and strongest sectors (those with high specialization and greater than $10 billion in GRP) comprise 50% of the region's total 2010 output: manufacturing, finance and insurance, business services and management, wholesale and administration, and transportation and logistics.

Of course, a nuanced understanding of the opportunities and challenges in the region's industrial base requires a more granular understanding of particular industries – and especially the "clusters" of related firms and connecting institutions – that benefit from their co-location here, have strong assets and growth potential, and present opportunities to become more productive and competitive. A great deal of quantitative analytics, industry research, interviews with experts, industry and firm leaders and other work has informed this analysis. Only highlights from this work are summarized here.

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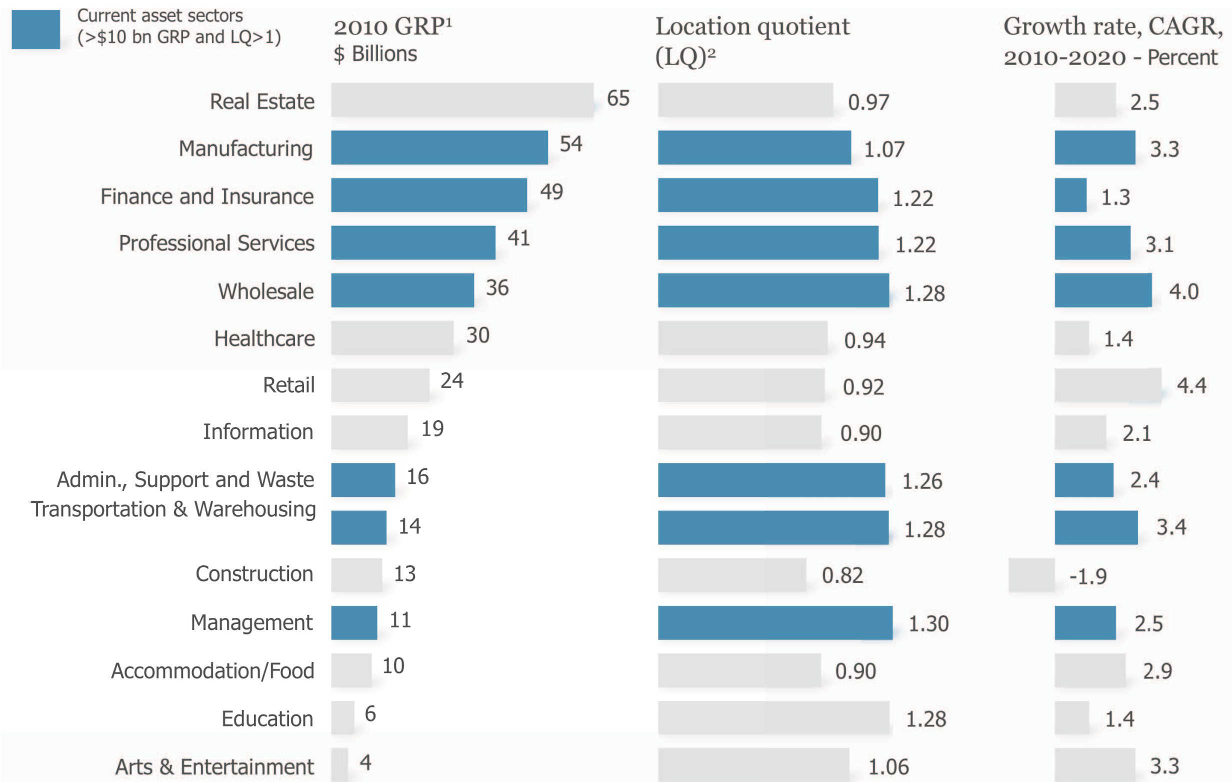
31 *As described in the previous section, "clusters" are defined as concentrations of economic activity – firms, functions, occupations, and related institutions – whose co-location and economic relationships enhance the productivity of firms in the cluster, and so drive the efficiency and productivity of the regional economy. They are distinct from sectors and industries (groupings of firms broadly in the same business), which themselves can be defined in various levels of granularity (from "manufacturing" to "structural metal fabricators"). "Industry" is generally used below to refer to more granular groupings within sectors.*

32 *Defined here as 2-digit NAICS groupings (e.g., manufacturing, retail trade, education, health care, accommodation and food services, etc.).*

Based on largest GRP, employment and location quotient (LQ),[33] a few particularly promising sectors and clusters emerged as opportunities to be further explored. Chicago's top asset sectors are shown in Exhibit 6 as a high-level summary. A more detailed and nuanced investigation helps to bring cluster-specific opportunities to the fore.

Exhibit 6

Chicago has Several "Top Asset Sectors" Today



1 Government employment and GRP figures are excluded from this analysis
2 LQ refers to location quotient: Chicago employment concentration vs. U.S. employment concentration

Source: BLS, Moody's Analytics

Manufacturing

Manufacturing is among the region's largest and most prominent sectors:

- $53.9 billion GRP
- LQ of 1.1 (specialized)

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33 *Location quotient (LQ) = share of Chicago employment in the industry, divided by the share of total U.S. employment in the industry. An LQ of 1.0 indicates an industry makes up the same share of the local economy as it does of the national economy. An LQ greater than 1.0 indicates relative local specialization; an LQ less than 1.0 indicates a lack of local specialization.*

- Projected GRP growth rate of 3.3% (compared to projected 2.1% growth for the economy as a whole) and projected employment growth rate of 0.51% (compared to projected 1% growth for the economy as a whole)[34]

Manufacturing is a large and diverse part of Chicago's economy, and a more nuanced look identifies manufacturing subsectors that are particularly promising. Examples of these, highlighted here because of their relatively high LQ and projected GRP growth, include Metalworking Machinery, Chemicals and Advanced Materials, and Pharmaceutical and Medical Device Manufacturing.[35]

Subsector	Location Quotient (2010)	Annual Projected GRP Growth (2010-2020)[36]
Metals and machine manufacturing	2.08	4.28%
Chemicals and advanced materials	1.55	4.26%
Pharmaceutical and medical device manufacturing	1.58	4.42%
Source: Moody's Analytics analysis of BEA and BLS data		

A renaissance is anticipated in manufacturing toward more advanced products and processes – that is, the adoption of innovative, cutting-edge science and technology, usually executed by relatively high-skilled workers who receive above-average wages.[37] Today, however, Chicago's productivity per worker in manufacturing is $133,000, significantly lower than the national average of nearly $150,000. This is due to a combination of factors. Several of our manufacturing industries are less productive than national norms,[38] and our manufacturing mix is weighted towards less productive industries. Chicago's productivity

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34 *Growth rates are annual rates for the period 2010-2020; Moody's Analytics, Bureau of Labor Statistics NAICS 31-33 data.*

35 *Chicago is also highly specialized in other manufacturing subsectors, most notably Food Manufacturing, which exhibits very high location quotients: for example, Sugar and Confectionery Product Manufacturing has an LQ of 2.2, and Bakeries and Tortilla Manufacturing has an LQ of 1.7. However, these industries have seen declining GRP and jobs in the past decade, and have stagnant or declining projected growth, so they are not mentioned here.*

36 *Compared to Moody's projected GRP growth of 2.1% CAGR from 2010-2020 for the Chicago economy as a whole. It is important to note that while growth projections have been used to inform the market analysis for various clusters, they should be viewed as representing a lower boundary for the level of growth that is achievable. I.e., they reflect growth that is anticipated under a particular projected scenario, whereas the Economic Growth Plan is aimed at strategically intervening to shift the region's growth pace and trajectory to higher levels.*

37 *Advanced manufacturing is neither an industry nor a cluster: industries and clusters are not "advanced"; the technologies and production processes they use are. Also, the "advanced" imperative is not the same for all industries and firms: different industries have different opportunities to become more advanced, and not all can adapt technologies to increase productivity sufficiently to remain competitive domestically. Finally, "advanced" means different things for different metropolitan areas depending on their position in the value chain. Not all metropolitan areas make semiconductors, medical devices, and airplanes, but what they do make is still important to global supply chains and has the potential to be produced in more advanced ways.*

38 *The Brookings Institution analysis of Moody's Analytics data in "Advanced Manufacturing: Developing Analytics to Underpin Strategy," Metropolitan Policy Program. MBP All-Teams Meeting, December 9, 2011, slide 8.*

per worker would be 8% higher, or $144,000, if Chicago's mix of manufacturing subsectors mirrored the national mix.[39]

Advanced manufacturing in Chicago will need a workforce with the right skills and a focus on innovation and research in both products and processes. Productivity, however, is not the only challenge. The city and region will also need to make a vocal commitment to its advanced manufacturers. Preliminary data analysis and interviews with Chicago-based manufacturers that fall into the category of small and medium-sized enterprises (SMEs)[40] reveal some key common needs. They could better flourish if they had more workers with the right skills, more research and development support, and a better perception of manufacturing among students, prospective employees, and parents. They would also profit greatly if Chicago and the region would clearly commit to meaningful support of the local manufacturing economy.

Headquarters and Business Services

Metropolitan Chicago is a global center for headquarters and corporate management, with:[41]

- 50+ large corporate headquarters[42]
- $11.5 billion GRP (headquarters alone)
- LQ of 1.3 (highly specialized)
- Projected GRP growth rate of 2.5%[43]

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39 *Ibid.*

40 *Nearly 95% of Chicago's ~11,000 manufacturing firms are SMEs (defined as companies with fewer than 500 employees).*

41 *"Management of Companies and Enterprises" in the terminology of the North American Industry Classification System (NAICS), through which economic data is organized, reported and analyzed.*

42 *Hoover's Economy; large corporate headquarters are defined as those with >500 employees and >$50 million in revenue.*

43 *Compared to Moody's projected GRP growth of 2.1% CAGR from 2010-2020 for the Chicago economy as a whole.*

Several subsectors of the business services sector are projected to experience growth in the region during the coming decade. Examples include:

Subsector	Location Quotient (2010)	Annual Projected GRP Growth (2010-2020)[44]
Management, scientific and technical consulting services	1.87	4.1%
Agencies, brokerages and other insurance-related activities	1.66	1.6%
Employment services	1.51	1.0%
Source: Moody's Analytics analysis of BLS and BEA data		

Metropolitan Chicago's high concentration of business services is a significant contributor to its ability to attract and retain national and international headquarters. The region's headquarters and related services firms act as a functional cluster, rather than an industrial one.[45] Functional clusters derive benefits through co-location of firms that perform the same functions across many industries and firms (i.e., management functions).[46] As a functional cluster, the performance of the region's headquarters and business and professional services firms are mutually reinforcing, benefitting from rich networks of exchange among firms and individuals.[47]

Despite the region's highly educated workforce and strong presence in business education, financial services and several other business service subsectors are experiencing a shortage of labor.

Transportation and Logistics

Transportation and logistics continues to play a central role in the region's economy:

- $14 billion GRP
- LQ of 1.28 (highly specialized)

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44 *Ibid.*

45 *Recent evidence suggests that the emergence of a global and knowledge-based economy is also affecting what economic activities most benefit from clustering. As transportation costs for goods have declined and the importance of face-to-face interactions between the human capital embedded in firms and institutions has increased, regions are experiencing the emergence of new "functional" clusters that specialize in different parts of production processes [Stuart Rosenfeld, "Industry Clusters: Business Choice, Policy Outcome, or Branding Strategy?" Journal of New Business Trends and Ideas 3(2) (November 2005): 11-12; See also Gilles Duranton and Diego Puga, "From Sectoral to Functional Urban Specialization" (NBER Working Paper 9112, 2002)].*

46 *At the same time, the information technology innovations associated with the knowledge economy reduce the cost of sharing, managing and communicating certain types of information across disparate geographies, allowing firms to separate functions that previously needed to be located in the same place.*

47 *Specifically, Duranton and Puga maintain that firms tend to locate their headquarters in places that offer a wide array of business services, while production plants are moved to more sector-specialized cities ("From Sectoral to Functional Urban Specialization").*

- Projected GRP growth rate of 3.4%[48]
- Projected employment growth rate of 0.7%
- Chicago has the most highways entering the region of any U.S. city.
- More than 74 million tons of rail freight originate or terminate in Chicago, compared to 34 million tons in Kansas City, the nation's second largest hub.[49]
- Chicago is the only city in the nation where six out of the seven major Class-one North American Railroads intersect. Roughly 25% of all domestic rail freight originates in, terminates at or passes through the region.[50]
- The Chicago region's strong capacity in transportation and logistics also creates a critical competitive advantage, supporting many other industries that rely on our T&L strength (for example, the manufacturing sector).

Several subsectors in which Chicago has a strong presence in transportation and logistics show promising growth projections over the next 10 years.[51]

Subsector	Location Quotient (2010)	Annual Projected GRP Growth (2010-2020)[52]
Scheduled air transportation	2.2	3.5%
Freight transportation arrangement	3.0	2.8%
General freight trucking	1.2	2.2%

A particularly promising cluster in the transportation and logistics category is "Business Freight," which had a location quotient of 1.2 in 2009, and employed 369,760 people, or approximately 9% of total regional employment. The components of the business freight cluster include:

- Suppliers: such as wood, paper, plastics and machinery manufacturing
- Freight: such as air, rail, water and truck transportation, couriers and postal service
- Support: such as warehousing, packing and crating, air traffic control and numerous other support functions
- Wholesale: including both durable and non-durable goods.[53]

Despite strong assets, future growth trends and recent developments, Chicago's freight pre-eminence is significantly threatened by congestion. It takes two to three days for goods to travel from Los Angeles to Chicago by rail, and it can take another two more days to get them through the Chicago area.[54] The cost

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48 *Compared to Moody's projected GRP growth of 2.1% CAGR from 2010-2020 for the Chicago economy as a whole.*
49 *U.S. DOT Freight Analysis Framework, 2007.*
50 *CREATE; U.S. Global Change Research Program.*
51 *Analysis of Moody's Analytics and BLS data.*
52 *Compared to Moody's projected GRP growth of 2.1% CAGR from 2010-2020 for the Chicago economy as a whole.*
53 *ICIC Cluster analysis.*
54 *Senate Report 107-224 - Department of Transportation and Related Agencies Appropriations Bill, 2003, Freight Congestion Study.*

of congestion for trucks is estimated at $2 billion annually.[55] While the use of air freight is increasing, reaching the airport in a timely way is impeded by ground traffic congestion.

The freight industry is more and more focused on intermodal transport, or the transportation of cargo by more than one mode without repackaging it. Chicago has several intermodal facilities, including some large facilities in outlying suburbs, that create employment opportunities particularly for lower-skilled workers. But changes to global intermodal transportation patterns, such as the widening of the Panama Canal, require strategic planning to assure continued competitiveness. Successful adaptation to those changes could increase rail and truck traffic from Gulf ports; failure to do so could lead to traffic flows being redirected to other regions, such as Memphis.

The sector will also need to rapidly adapt to emerging technologies, such as those currently revolutionizing supply chain management. The region is home to a number of fast-growing logistics firms that are increasingly applying new technologies and may have the opportunity to grow as supply chain management practice and technology continue to evolve.

Tourism and Entertainment

Tourism and entertainment, while it does not have high specialization, presents an opportunity for Chicago as its fourth-highest exporting sector in 2008, and a strong base of assets to build upon:

- $20 billion GRP (including accommodation, restaurants/food, and other entertainment and cultural industries)
- LQ of 0.73
- Projected GRP growth rate of 2.5%[56]
- Projected employment growth rate of 1.23%
- 39 million visitors collectively cycled $11 billion through the region's economy in 2010 generating $616 million in tax revenues.[57]

However, Chicago tourism, conventions, and entertainment cluster is underperforming compared with peers. Chicago has seen merely 2% growth in visitors per year from 2000-2010, compared to over 3% growth in New York City. This stagnation is driven primarily by a 21% decline in overseas visitors and a 28% decline in domestic business visitors over the decade.[58] Chicago also sees below-average visitor spending, and the region's institutional promotion of tourism is fragmented and uncoordinated. While many attribute Chicago's poor performance to lower levels of investment in tourism promotion ($27.6 million in 2010, compared to $40 million for New York and $50 million for Orlando), many cities have achieved more with less.[59] Chicago has a strong base of cultural assets, including its museums, its acclaimed and diverse restaurants, its strong offerings in theater and music, its sports teams, and tourist attractions such as Millennium Park. But Chicago's tourism, conventions, and entertainment "product" has much opportunity for improvement. Key attractions like Navy Pier could be modernized, and our visitor infrastructure improved, including airport transit and convention center access for business tourists. With proper

55 *Texas Transportation Institute, Urban Mobility Report 2011.*

56 *Compared to Moody's projected GRP growth of 2.1% CAGR from 2010-2020 for the Chicago economy as a whole.*

57 *Civic Consulting Alliance analysis of Chicago Office of Tourism data; $229 million in tax revenues accrued to the City of Chicago and $387 million to the State of Illinois.*

58 *Civic Consulting Alliance analysis of Chicago and benchmark city tourism data.*

59 *According to a Civic Consulting Alliance analysis, other cities spend fewer marketing dollars per visitor, but achieve higher levels of spending per visitor (i.e., Boston and Atlanta). New York City, Los Angeles and Orlando all spend moderately more per visitor, but achieve much higher returns in terms of spending per visitor.*

attention to product development, marketing efforts could have a significant positive impact on tourism.[60] It is important to note that growth in tourism, conventions, and entertainment can create entry-level employment opportunities.

Other Clusters

Alongside the region's large asset sectors, several smaller sectors are rapidly emerging in line with global market trends. These include clean tech, life sciences, and digital technology.

As a relatively new sector that cuts across many existing industries, "clean tech"[61] does not have the full set of data that allows us to track its gross product by region.[62] But there is no doubt that measured on a national and global scale, clean tech is growing rapidly. In the last year, global revenue for the wind, solar photovoltaic, and biofuels subsectors alone grew 35% to a total market size of $188 billion.[63] The energy efficiency market is also surging, hitting $200 billion in 2010 and projected to reach $311.7 billion by 2015.[64] Today, Chicago is a leading exporter of "clean" goods and services, shipping out a total value of approximately $2 billion.[65]

Chicago's largest clean-tech subsector, broadly defined, is energy and resource efficiency, which employs over 37,000 individuals (of a total of 79,388 "clean" jobs), more than all but one other U.S. metropolitan area.[66] Greater Chicago is home to some of the biggest companies in the energy efficiency sector,[67] and the region is also seeing the emergence of several related start-up firms. The metropolitan region also has high numbers of firms in energy efficient lighting, building design, and related products and services. Yet despite this strong base, Chicago's growth in this sector does not match the huge growth being experienced globally, in part due to limited local demand for energy efficient products and services. Strong local demand is a key competitive advantage that makes a sector more innovative and productive.[68]

Life sciences and healthcare IT are similarly promising emerging clusters, with numerous existing initiatives, budding ecosystems and considerable success stories. It is important that these high-growth emerging clusters be identified and monitored and that new start-ups in the sector be encouraged.

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60 *By one estimate, the potential economic impact of improved marketing efforts to support Chicago tourism is an additional $1.5 billion-2 billion in annual visitor spending by 2020. Civic Consulting Alliance analysis of average projected growth in visitor spending based on benchmark cities that have restructured and/or conducted concerted marketing efforts to improve tourism. Visitor spending is projected to grow from a 2011 baseline of $11.4 billion to a 2021 baseline of around $16.5 billion. This could increase to $18.5 billion+ with additional marketing efforts.*

61 *Companies in the clean tech sector make products and provide services that save energy or resources, create energy from "clean" sources, or reduce pollution and waste. The sector can be further broken down into renewable energy, energy and resource efficiency, conservation, recycling and waste management, each of which includes more detailed subsectors.*

62 *It is, therefore, necessary to triangulate between growth in the global and national market and local assets, such as employment, venture capital investments, related industries, etc., to understand the most promising opportunities for a region.*

63 *Clean Edge, http://cleanedge.com/reports/report-download?nid=21560.*

64 *BCC Research, http://www.bccresearch.com/report/green-technologies-markets-env012a.html.*

65 *"Sizing the Clean Economy: A National and Regional Green Jobs Assessment," Brookings Institution Metropolitan Policy Program 2011, available at: http://www.brookings.edu/metro/Clean_Economy/.)*

66 *Only New York City employs more people in this cluster ("Sizing the Clean Economy: A National and Regional Green Jobs Assessment," Brookings Institution Metropolitan Policy Program 2011, available at: http://www.brookings.edu/metro/Clean_Economy/.) For a detailed analysis of Chicago's opportunities in "clean tech", see "The Chicago Region's Opportunities in the Green Economy," Cleveland, Cohen and Weissbourd (Metropolis Strategies, 2011).*

67 *Among such firms with a strong local presence are Johnson Controls, Siemens Building Technologies, and Schneider Electric.*

68 *Michael Porter, The Competitive Advantage of Nations.*

Exports

Chicago ranks third among U.S. metropolitan areas in total export volume ($53.9 billion in 2010).[69] While Chicago exports roughly the same as the national average (10.9% of GRP; US average is 10.7%), this is disproportionately low given the products and services Chicago produces.[70] Chicago specializes (LQ>1) in several industry sectors that are high growth, differentiated, and tradable, and for which demand is projected to be among the top 10 most-demanded imports by the world's three largest emerging economies – Brazil, India, and China – over the next 10 years. (Chicago sectors with LQ >1 italicized in the chart below.) Additionally, business services will remain in demand from developing and developed economies alike, especially in fields such as engineering consulting and architectural design.[71]

Rank	Brazil	India	China
1	*General and Special Purpose Machinery*	*General and Special Purpose Machinery*	Basic Chemicals and Fertilizers
2	Basic Chemicals and Fertilizers	Basic Chemicals and Fertilizers	Semiconductors, Circuit Boards, LCD
3	*General Industrial Machinery*	*Other Manufacturing*	*General and Special Purpose Machinery*
4	Basic Industrial Chemicals	*General Industrial Machinery*	*Medical and Measuring Equipment*
5	*Specialty Chemicals*	Transmitters and Routers	Non-Ferrous Materials
6	Refined Petroleum and Coke Products	*Iron and Steel Manufacturing*	*General Industrial Machinery*
7	Refined Petroleum Products	Refined Petroleum and Coke Products	Transmitters and Routers

69 *Emilia Istrate and Nicholas Marchio, "Export Nation 2012" Washington, Brookings Institution, forthcoming 2012. Exports include goods and services and are estimated by production location; therefore, they do not match the U.S. Census Bureau's estimates of metropolitan exports, which reflect origin-of-movement. Exports exclude waste, scrap, used merchandise, goods returned to Canada, special classification provisions, re-exports, military transfers, government services, and expenditures of foreign embassies and international organizations in the United States. Export values for 2003 are expressed in $2010, inflation-adjusted by industry. Chicago is third behind Los Angeles ($80 billion) and New York ($78 billion).*

70 *Ibid.*

71 *For example, the Chicago-based firm of Adrian Smith and Gordon Gill Architecture, founded by Adrian Smith, the architect who designed the Burj Khalifa in Dubai, has recently won contracts to design buildings in Wuhan, China, Saudi Arabia, and Vancouver, Canada. See http://smithgill.com/#/vision/our_services/.*

Rank	Brazil	India	China
8	Aircraft and Spacecraft	*Special Industry Machinery*	*Iron and Steel Manufacturing*
9	*Special Industry Machinery*	*Specialty Chemicals*	*Specialty Chemicals*
10	*Iron and Steel Manufacturing*	*Food Products*	*Special Industrial Machinery*
Source: Moody's Projections			

While Chicago's large corporations contribute significantly to export volume, there are untapped opportunities among the region's small and medium-sized enterprises (SMEs).[72] Nearly 95% of Chicago's 11,000 manufacturing firms and 32,000 services firms are SMEs. Of these, it is estimated that less than 5%, or 500 manufacturing SMEs and 1,600 services SMEs, export today.[73]Those that do export mostly do so to only one country. [74] Existing federal and state trade assistance institutions lack the capacity to identify and assist export-ready SMEs, and export-ready SMEs lack the capacity to identify promising markets and execution for their products.

Human Capital

With more than 4 million workers, Chicago is the third-largest labor market in the U.S. The region's human capital status is bifurcated. Its educational levels are greater than the U.S. average (34% of the population holds a bachelor's degree or above, compared with 28% of the U.S. population),[75] and it is home to top undergraduate and graduate institutions, including two of the top five business schools in the nation (the Kellogg Graduate School of Management at Northwestern University, and the University of Chicago Booth School of Business). The city also hosts many No. 1 ranked programs, such as economics at the University of Chicago and industrial design at the Illinois Institute of Technology. However, while the metro area's high school attainment levels are equivalent to the U.S. average (86% of population holds a high school degree or above), the City itself underperforms, with only 78% of the population holding a high school degree or above.

The restructuring of Chicago's economy toward new industries creates challenges for workers who have lost jobs and may not have the skills necessary for available new jobs. The most drastic job losses over the

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72 *According to the Small Business Administration definition of firms employing fewer than 500 employees.*

73 *The SME advanced manufacturing sector comprises manufacturers of chemicals, electrical, machine and metals, health and medical devices, at the four-digit NAICS code level (~11,000 total). The SME services sector comprises general business services and financial services at the four-digit NAICS code level (~32,000 total). Less than 5% of U.S. SMEs export. The estimate is based on applying the national average to the total number of SMEs in the advanced manufacturing sector; it is a conservative estimate, given that manufacturing makes up nearly 14% of Chicago's export economy. Because this share is larger than that of any other sector, it is likely that more than 5% of manufacturing SMEs export. International Trade Administration (total SMEs exporting in 2009) and the Census Bureau (total employer firms).*

74 *See, e.g., Global Small Business Blog: http://borderbuster.blogspot.com/2010/02/wanted-ups-to-help-double-smb-exports.html.*

75 *U.S. Census Bureau, American Community Survey, 2005-2009 Estimates.*

last five years occurred in construction (-30%) and manufacturing (-19%), while the largest job gains were seen in educational services (+22%) and healthcare (+12%). This shift has led to over 400,000 unemployed in the Chicago metro area despite 215,000 job openings (with an even more pronounced mismatch in the City of Chicago, with over 130,000 unemployed despite 120,000 job openings). In the metro area, excess demand exists in the management/business/financial sector (11,000 jobs), and the most extreme excess supply exists in transportation and material moving (35,000 workers), services[76] (37,000 workers) and construction (56,000 workers). In the City of Chicago, the trend is the same, with excess demand in the management/business/financial sector (19,000 jobs) and most excess supply in transportation & material moving and construction, at 14,000 jobs each. The specific occupations in highest demand are in the computer and mathematical category in areas such as systems analysis, web development, and database management.[77]

New job categories and skill requirements are emerging with increasing speed, making continuous learning and upgrading, particularly of more specific skill sets, more important. Shortages are particularly evident among mid-skilled workers: approximately 60% of job openings require a middle (high school plus some college, or high school plus associate degree) level of education, but only 54% of the region's workers have attained those education levels.[78] Conversely, demand for low-skilled workers continues to decrease and the need for ensuring basic skills remains essential.

Future trends also indicate that demand for high-skilled workers will increase, particularly in a specific subset of fields. Currently, demand exceeds supply in select parts of finance, advanced manufacturing, and information technology.[79] This trend extends beyond the Chicago region; demand for workers to fill high-skilled occupations in these industries is high in many metro areas, so regions are effectively competing with one another for a limited pool of highly sought-after talent. Chicago is gaining high-skilled workers, but far more slowly than its peers. In 2009, Chicago gained 3,500 people aged 25+ with a bachelor's degree, but in the same year, Boston gained 17,000, Los Angeles gained 79,000, and San Francisco gained 94,000.[80] Demand for high-skilled workers is anticipated to grow at twice the rate of demand for low-skilled workers.[81] At the same time, Chicago is conferring a smaller and decreasing number of highly-demanded STEM[82] degrees relative to total degrees conferred at regional institutions: 13% of all degrees vs. U.S. average of 14% and a best-in-class rate of 19%.[83]

Along with the skills mismatch, another barrier to labor market efficiency is the *spatial* mismatch. Firms and workers struggle to find and evaluate each other because jobs are not located near or within easy access to areas where workers with relevant skills live. In high-poverty areas, which have a lower-skill, minority population, employment grows more slowly than in the rest of the metro area (7 percentage points from 1998 to 2009).[84] Compounding this challenge is the tendency for these neighborhoods to be isolated from primary job centers. While Chicago ranks 20th in transit coverage among U.S. metropolitan areas, it ranks 76th in transit access for jobs.[85] This spatial mismatch results in underemployment and unemployment among certain segments of the population.

Chicago is not using its human capital base to its fullest potential, as several important segments of Chicago's population are under-utilized. Foreign-born populations have lower educational attainment levels

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76 *Defined as Healthcare, Food Prep, Protective, Grounds Crew, Personal Care*

77 *Current Population Survey March 2011; Help Wanted Online Data for Q3 2011.*

78 *Brookings analysis of IPUMS and BLS data.*

79 *Ibid.*

80 *OECD.*

81 *Georgetown Center for Education and the Workforce.*

82 *Science, Technology, Engineering, and Mathematics.*

83 *National Center for Education Statistics IPEDS.*

84 *ICIC analysis of 2009 data.*

85 *Brookings Report: "Missed Opportunity," OECD analysis of census data.*

than U.S.-born populations, and African American and Latino populations have lower educational attainment levels than whites.[86] The region's black-white achievement gaps in mathematics are above the U.S. average (7 points above U.S. average for Illinois, and 5 points above the U.S. average for the City of Chicago).[87] The skewed educational levels are coupled with income disparities: African Americans have only 49% and Latinos 64% of the median household income of whites in the Chicago region.

If not addressed, the effects of these disparities will deepen. While the region's white population is slowly shrinking, black and Latino populations are growing (Latinos constituted 18% of the population in 2000 and 22% in 2010).[88] Additionally, the Latino participation rate in the labor market (74%) is higher than the participation rate for whites (71%) or blacks (63%).

Chicago's working population is also aging. In 2000, 89% of the metro area's population was under the age of 65, but by 2020 that proportion will fall to 86%. (For the City of Chicago, in 2000, 90% of the population was under the age of 65, but by 2020 the number will be 87%). As Chicago's workforce shrinks, ages, and continues to diversify ethnically, the under-utilization of certain human capital segments will be more keenly felt throughout the economy.[89]

Several characteristics of the workforce development system – stretching from higher education to community colleges and site-specific training programs – lead to poor matching of human capital supply and demand. For employers and workers alike, the transaction costs involved with making the best "match" remain too high for the following reasons:

- **Finding costs:** It has become harder for employers to find the right workers, and vice-versa. The proliferation of job search websites has led to a drastic increase in application volume,[90] causing employers to be so inundated with information that they turn to other avenues. As a result, 80% of jobs are now filled through non-anonymous sources such as networking or headhunters
- **Measurement costs:** Workers no longer stay at the same job for most of their career. The trend is to change jobs or even careers several times, making it difficult both for prospective employers to assess skills learned on the job and for workers to assess how their skill sets match job requirements. Thus, the field is moving toward more occupation-specific credentialing, certification of specific skill sets, and stacked credentials to show progression of skill development. Yet employers are often reluctant to work within the systems that provide those metrics because of incentive misalignment and inadequate demand information.
- **Lack of accountability to the market:** The educational and provider system is largely supported by public funding, and as a result much less subject to market mechanisms, which would make it more accountable to employers or workers. This third-party provider system is also not sufficiently demand-driven, because it lacks timely and reliable market information. By 2018, for example, Chicago will need about 11,000 more graduate degree holders in the computer science and engineering fields than the current trajectory would yield, and 23,000 more undergraduate degree holders.[91]
- **Fragmentation in the provider system**: Employers are frustrated and discouraged by the provider network in light of past experience and fragmentation. There are 23 community colleges in the Chicago metropolitan area, and at least 85 workforce development providers.[92] Employers

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86 *US Census Bureau, 2009 American Community Survey.*

87 *National Center for Education Statistics, 2009.*

88 *US Census Bureau, Census 2000-2010.*

89 *Illinois Departments of Employment Security and Commerce and Opportunity, Moody's Analytics.*

90 *Interviews with Chicago workforce development providers.*

91 *Georgetown Center for Education and the Workforce, estimates of educational attainment needs by occupation 2008-2018 in Illinois.*

92 *Chapin Hall report: "Chicago Workforce Development Programs: System Map and Inventory."*

express frustration that many of these are not sufficiently demand-driven. Many providers are focused more on general remedial education (rather than, e.g., industry- or occupation-specific skills development and credentialing aligned with employer demand).

- **Labor market demand information is inadequate:** Providers who want to be more demand driven lack the adequate labor market information to make appropriate programmatic decisions. Providers have indicated that they are looking for actionable demand-side information to guide their programming decisions. Labor market data gathering and dissemination is currently inefficient because:
    - Multiple organizations gather and disseminate labor market information, such as projected job growth in a particular industry. This creates redundancies and mixed messages.
    - Data gathering is passive. There is no all-encompassing employer survey that identifies true job vacancies in the near-term at an actionable level of detail (e.g., specific requirements for vacancies, instead of broad regional aggregate data).

Innovation and Entrepreneurship

Innovation can be understood as flowing from existing firms, often in conjunction with the commercialization of university- and lab-based research; from entrepreneurship and the "ecosystem" that supports it, including networks of peers, mentors, customers and investors; and from the interactions of firms in clusters.

Metropolitan Chicago has many key attributes of a center of innovation. It has highly valuable research and development driven by federal research labs, nationally recognized universities and private industry; support services for entrepreneurs seeking to commercialize new ideas and technologies; industry-specific innovation incubators and accelerators; and several stage-specific financing entities.

Nonetheless, Chicago has historically lagged behind other large metropolitan areas along the "innovation pipeline." Per capita R&D spending in Illinois was approximately $1,100 in 2007, compared with $1,200 in the United States as a whole and $1,500 in peer regions. Chicago's academic institutions take in far fewer R&D dollars than benchmark universities; for example, Northwestern and the University of Chicago together reported almost $800 million R&D expenses in 2009, versus approximately $1.4 billion reported at MIT alone.[93]

Chicago also can improve its performance at the commercialization stage of the innovation process. Growth in the number of patents established per year between 1998 and 2009 was negative in Chicago (-3.18%), while the United States overall saw a marginal increase (0.05%). In terms of patent growth, Chicago ranks 243rd out of 363 global metropolitan areas. The region also trails peers in the number of utility patents generated per capita, with the State of Illinois generating 0.28, the U.S. overall generating 0.34, and select peer states generating 0.49.[94]

Despite having two of the top-ranked business schools in the country (the University of Chicago's Booth School of Business and Northwestern's Kellogg School of Management),[95] Chicago underperforms in rates of new business formation. The Kauffman Entrepreneurship Index – which measures monthly business creation rates in metropolitan areas throughout the United States – ranks metropolitan Chicago 12th in the

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93 *Association of University Technology Managers (AUTM) Licensing Survey 2009.*

94 *United States Patents and Trademarks Office. Note only state-level data was available so used as a proxy here; peer states include California, Colorado, Indiana, Massachusetts, Minnesota, Missouri, New York, Ohio, Texas, Washington.*

95 *As reported in Bloomberg BusinessWeek's "2010 Best U.S. Business Schools" rankings.*

U.S., behind peer regions such as New York, San Francisco, Houston, and Atlanta.[96] Measured in another way, university students form 0.9 start-up companies per million residents in Illinois, compared with 2.2 in peer regions.[97]

Chicago has historically trailed peer regions in the financing made available to start-up companies. Venture capital firms invested $39 per capita in Illinois in 2010, compared with $76 in the United States as a whole and $141 in peer states.[98]

Finally, there is also some indication that many of Chicago's mature industries, including certain manufacturing sectors, have lower rates of productivity than their competitors in other parts of the country. This suggests comparably low rates of innovation and new technology adoption among firms in the region's most historic industries. Given that manufacturing companies are responsible for industrial R&D in the United States and employ 63% of domestic scientists and engineers, a competitive manufacturing sector is essential if Chicago is to remain a leader in knowledge production and innovation.[99]

Despite these historical trends, Chicago has gained considerable momentum in entrepreneurship-based innovation in the last few years, with increased start-up activity and a growing support network for entrepreneurs. A flurry of high-tech firms have formed – at least 773 opened their doors between 2009 and 2010 – and Illinois now ranks second in the nation for the number of high-tech start-ups.[100] This trend toward high-tech entrepreneurship appears particularly strong in the Chicago region, with nearly half of all start-ups there defining themselves as providing consumer web or digital products or services.[101]

This growth in entrepreneurial activity seems to have generated a significant increase in the availability of VC financing as well. Chicago's start-up firms have seen annual VC investments rise to over $1 billion for the first time since 2000. Start-ups in Illinois have raised over $2 billion in VC funding since the start of 2010, with slightly less than half of those funds going toward Chicago-based Groupon.[102] The trend may be particularly true in the digital technology start-up community, where VC funding has increased by 40% in the last year even after excluding Groupon as a statistical outlier.

These trends are encouraging, and Chicago's entrepreneurial community appears to be gaining considerable momentum. The region is developing a more robust and supportive entrepreneurial ecosystem – offering entrepreneurs greater access to training programs, peer groups, and stage-specific financing – as well as a more innovative, entrepreneurial, and risk-taking culture.

At the same time, several challenges continue to prevent the region from maximizing innovation, which should occur not exclusively through entrepreneurship, but also in existing firms through commercialization of R&D and cluster-based strategies:

- The value of both industrial and university-based R&D continues to lag significantly behind that of peer regions. Academic and institutional research agendas can be better aligned with the needs of

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96 *Kauffman analysis of data from the Current Population Survey (CPS), a monthly survey conducted by the U.S. Bureau of the Census, and the Bureau of Labor Statistics.*

97 *Institute for Strategy and Competitiveness, 2009.*

98 *PwC Money tree report; 2010. Note only state-level data was available so used as a proxy here. Peer states include California, Colorado, Indiana, Massachusetts, Minnesota, Missouri, New York, Ohio, Texas, Washington*

99 *"Report to the President on Ensuring American Leadership in Advanced Manufacturing," The President's Council of Advisors on Science and Technology, June 2011.*

100 *Cyberstat report, 2011.*

101 *Survey data from the 2010 Illinois Innovation Index. Please note that survey respondents may have checked more than one area of specialization.*

102 *Illinois Innovation Index publication of Illinois Venture Capital Association data, Chicago Tribune; National Venture Capital Association analysis of PWC Moneytree report; 2011.*

private industry. This misalignment limits both the ability of research institutions to monetize R&D breakthroughs and the capacity of the region's mature industries to adopt innovative new technologies.

- While existing institutions have stimulated considerable innovation through entrepreneurship in some of Chicago's emerging economic clusters, particularly the information technology sector, entrepreneurial-driven and existing-firm-driven innovation opportunities in other sectors have not experienced such robust growth.
- More mature industries may lack the information, capacity, and capital (as well as, in some instances, short-term market incentives) necessary to invest in technology and innovation.
- Despite the recent creation of valuable institutions such as the Chicagoland Entrepreneurial Center, Excelerate Labs, the 1871 Chicago Tech Center, TechNexus, and the Chicago Urban League's Entrepreneurship Center, young businesses, including minority- and women-owned businesses, and Business Enterprises Owned by People with Disabilities continue to report a need for better access to mentors, targeted technical assistance, and other forms of both informal and formal guidance.
- Firms continue to cite costly and time-consuming bureaucratic processes and regulations as a barrier to innovation, entrepreneurship, and the commercialization of new ideas.
- Despite recent progress, Chicago does not yet enjoy the innovation "brand" that defines many peer regions, such as greater San Francisco and the Silicon Valley.

The Built Environment: Physical and Virtual Infrastructure

From the point of view of economic growth, the purpose of cities is to reduce the transportation costs of goods, people, and ideas.[103] Concentrating and connecting assets promotes higher productivity and more efficient economic activity. Transportation costs are a function of the proximity of businesses to their suppliers, employees, and consumers, and of the efficiency of the connections between them. Keeping these costs low requires focusing on the concentration of these economic actors, and the connections among them. Efficient regions nuture mixed-use communities where people live near jobs, retail goods and services, and can take advantage of transportation that easily connects them.

Chicago's urban form does not meet this ideal picture. According to the 2010 census, the City of Chicago lost 200,000 residents in the past decade, primarily due to migration to the far suburbs.[104] Decades of sprawl have created a strong mismatch between where workers live and where they work; nearly 69% of the region's residents travel more than 10 miles each way to and from work. For individuals without cars, the picture is even worse; only 24% of jobs in the region are accessible by public transit within 90 minutes. Despite having the second largest transit system in the nation, the region ranks 76th in terms of job access by transit.[105]

Because fast-growing employment centers are located far from affordable housing, it is more difficult for otherwise employable people to find employment. This is a contributing factor to Chicago's pockets of concentrated poverty, which drag down the regional economy. The poverty rate in the City is over twice that of the metropolitan region as a whole.[106] Unemployment in many communities on Chicago's West and South sides topped 15% in 2007, even before the impact of the recession.[107] The mismatch between jobs

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103 *Glaeser et al., "Growth in Cities" (National Bureau of Economic Research Working Paper July 1991).*

104 *U.S. Census, 2010; "Chicago's population drops 200,000," Chicago Tribune February 2011.*

105 *"Missed Opportunity: Transit and Jobs in Metropolitan America," Brookings Institution Report, May 2011.*

106 *Kneebone, Elizabeth and Emily Garr, "The Suburbanization of Poverty: Trends in Metropolitan America, 2000-2008," The Brookings Institution, January 2010.*

107 *Metro Chicago Information Center, "Chicago Community Area Unemployment Rates (2007)."*

and housing also takes a heavy toll on Chicago's infrastructure by increasing congestion, as described below.

As the means by which goods, people, and ideas move, infrastructure plays a key role in improving regional efficiencies and competitiveness. On the surface, Chicago's infrastructure assets appear strong. Chicago is a major global hub for moving people, goods, and information. O'Hare and Midway airports service over 80 million passengers annually and service non-stop flights to over 200 destinations throughout the world.[108] Within the region, the Chicago Transit Authority provided nearly 517 million rides in 2010, and the Metra commuter rail system provided another 81 million.[109] Roughly 25% of all domestic rail freight originates in, terminates at or passes through Chicago.[110] The region also possesses significant digital infrastructure assets, with fiber optic lines laid along rail lines and a strong hub status for computing networks.[111]

However, the region's roads and rails are among the most congested in the nation. Traffic congestion costs businesses and workers an estimated $8 billion per year, including costs of $2 billion for trucks alone.[112] Rail congestion also imposes a dramatic cost on businesses: goods take two to four days to travel from Los Angeles to Chicago and as many as two more days to get through the Chicago metro area. [113] Unpredictable travel times and delayed shipments add uncertainty, logistical complexity, and more cost to firms' operations. The City's traditional infrastructure assets in transportation, energy, water, and other public services like education are also in need of upgrades.

Roughly 25% of all domestic rail freight originates in, terminates at, or passes through Chicago.

The moment is right for the regeneration of Chicago's neighborhoods. After many years of outmigration from the city to the suburbs, individuals and firms are moving back to urban neighborhoods, seeking proximity to jobs, talent, transit, and retail amenities.[114] Furthermore, the Chicago Housing Authority's Plan for Transformation has laid the groundwork for creating vibrant mixed-income communities by beginning to redevelop a number of large public housing developments.

Upgrading and transforming Chicago's infrastructure requires large amounts of funding, which has traditionally been uncoordinated and inconsistent within the state. The lack of a sustained local source of capital funding for transit, in particular, results in a high reliance on federal assistance. Furthermore, funds originally earmarked for capital improvements have been utilized to sustain operations rather than to build next-generation infrastructure. Funds are increasingly limited as a fiscal crunch reduces the opportunity to issue municipal bonds for new projects. Finally, because multiple transportation agencies compete for funding and do not have a strong history of collaboration or long-term planning, the challenges to making transformative improvements in Chicago's transportation infrastructure are high.

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108 *Chicago Department of Aviation, Budget Hearing 2012, p. 2.*

109 *CTA Annual Ridership Report, Calendar Year 2010 (1/24/11); Metra Ridership Reports – System Facts (available at http://metrarail.com/metra/en/home/about_metra/planning_records_reports/ridership_reports.html).*

110 *Chicago Region Environmental and Transportation Efficiency Program (CREATE), Final Feasibility Plan, p. 9.*

111 *City of Chicago, Department of General Services, Request for Information, Chicago CivicNet, 2001, pp. 20-22, Data Center Knowledge.*

112 *Texas Transportation Institute, Urban Mobility Report 2011.*

113 *Senate Report 107-224 - Department of Transportation and Related Agencies Appropriations Bill, 2003, Freight Congestion Study.*

114 *See, e.g., Weissbourd, Bodini and He, "Dynamic Neighborhoods: New Tools for Community and Economic Development," Living Cities, 2009.*

Public and Civic Institutions

Metropolitan Chicago has a large and highly fragmented system of government. Within the fourteen-county metro area there are 1,723 units of government. Cook County alone accounts for 543 units of government.[115] Authority is fragmented both horizontally, among many geographic jurisdictions, and vertically, among multiple special-purpose entities. Businesses are consequently faced with a complex bureaucracy, which they must navigate to accomplish routine tasks such as obtaining business licenses, building permits, and other administrative needs. Economic development activities are also highly fragmented, with more than $2 billion in spending and tax incentives distributed each year across more than 100 organizations.[116]

Regulations imposed by individual units of government also present real challenges to day-to-day business operations. For example, it can take as long as 4 months to get a permit to hang a sign above the sidewalk in the City of Chicago; manufacturers must interact with numerous city departments as well as their local aldermen to address zoning, services, and regulation.[117] Government officials are increasingly aware of the obstacles these sorts of regulatory processes pose to businesses, and efforts to streamline regulatory and other processes are under way.

Within the 14-county metro area, there are 1,723 units of government.

In examining the type and quality of public goods that government provides in return for corporations' tax dollars, the Chicago region's tax value proposition receives mixed reviews. In surveys, businesses rate the region highly on location, talent, quality of life, and cost of living, but low on taxes, incentives, and permitting/regulations.[118]

A further challenge to the public sector's ability to support economic growth in the Chicago region is the fiscal condition of the State of Illinois. Fiscal imbalances and the concern they create inhibit economic activity. A more stable state fiscal environment would provide the region with greater funding support for key programs and firms with a more predictable business environment.

The region's business culture also receives mixed reviews. Chicago has a tradition of highly engaged corporate, labor, civic and community leaders who have partnered with the public sector effectively on transformative projects ranging from the comprehensive Burnham Plan of 1909 to the reversal of the Chicago River at the turn of the 20th century to the creation of Millennium Park in 2004. Massive initiatives currently under way that demonstrate effective public-private partnership include the CREATE program to minimize rail freight congestion; the expansion of O'Hare airport; and ongoing efforts to reinvent the Chicago Public Schools and the City Colleges.

Despite this tradition, some report that it is difficult for newcomers (e.g., new CEOs or civic leaders) to break into the community. In addition, some entrepreneurs report that they encounter a high degree of risk-aversion and fear of failure, both characteristics that can hinder the region's attractiveness to start-up companies.

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115 *Metropolis Strategies analysis of 2007 Census of Governments Data.*

116 *Metropolis Strategies analysis of economic development spending by major government entities (e.g., the State of Illinois and City of Chicago) and non-profit organizations.*

117 *Institute for Justice Clinic on Entrepreneurship study.*

118 *Illinois Chamber of Commerce Opportunities and Challenges of Doing Business in Illinois: A Survey of Illinois Commercial and Industrial Real Estate Agents and Brokers: 2008.*

3. A Framework for Growth: From Market Analysis to Transformative Strategies

10 Transformative Strategies for the Future of Chicago and the Region

With the foregoing market analysis as a starting point, ten high-priority strategies for economic growth were identified. Each strategy is designed to increase the efficiency and productivity of the economy by building on Chicago's unique assets and addressing its challenges and opportunities. The strategies are intended to work together. They complement many existing efforts, and provide a framework to align future economic growth decisions, all with the aim of accelerating growth and achieving the goals of the Plan.

The 10 strategies are summarized in Exhibit 7 and described in detail in this chapter. The strategies cut across market levers and are meant to mutually reinforce one another.

For each strategy we mention a brief set of relevant initiatives already underway; these are intended only to illustrate the strategy, not to provide a comprehensive accounting of existing efforts. One broad benefit of this Plan is that it provides a platform to help contextualize, coordinate and improve current efforts. Today's policies and investments are often fragmented and lack strategic alignment; the Plan's framework provides a clearer set of "north stars" to guide future investment and policy decisions.

Exhibit 7

10 Transformative Strategies for Chicago's Economic Growth (1/2)

Strategy	Core Elements
1 Become a leading advanced manufacturing hub	• Accelerate growth in advanced manufacturing industries in which Chicago specializes • Help low-growth legacy manufacturers to repurpose assets and adopt advanced technologies • Expand workforce training programs to give workers the skills manufacturers seek, but struggle to find • Make a clear commitment to support the region's manufacturers, in word and deed, through initiatives and improved certainty and efficiency in zoning, permitting, and other business processes
2 Increase attractiveness as a center for business services and headquarters	• Develop the right array of business service firms to support the needs of headquarters in the future • Support the region's existing companies through proactive outreach to retain local HQs and encourage expansion of corporate functions and capacity in Chicago • Proactively attract U.S. companies considering relocation or expansion of corporate HQs or other sites • Position Chicago as the location of choice for global companies seeking to establish North American HQs
3 Become more competitive as a leading transportation and logistics hub	• Remove barriers to growth by reducing congestion and improving aging infrastructure • Develop logistics parks in areas where rail activity is projected to increase, near communities whose populations need employment, and in areas that support manufacturing growth • Support the firms and industries that are poised to capture future innovations in the sector (e.g., technology-driven supply chain management, intelligent transportation systems) • Develop institutional capacity to effectively plan for and implement major improvements in transportation and logistics
4 Make Chicago a premier destination for tourism and entertainment	• Reduce fragmentation in governance and increase coordination in strategies and branding • Pursue product development programs, including targeted improvements to infrastructure to increase "visitor-friendliness", improving attractions and quality of place, and improving the convention competitiveness and the business travel experience • Increase investment in strategic marketing and promotions • Seek opportunities to leverage relationships and assets to attract visitors from key global geographies
5 Make Chicago a nationally leading exporter	• Develop a consistent strategy for the region's exports to better identify the right opportunities and markets • Focus on export support for SMEs, given their presence in the market and greater challenges to exporting • Connect and engage firms of various sectors, sizes, and stages of export-readiness by providing general expertise, links to resources, and one-on-one support and mentoring • Develop a capacity to better leverage existing resources at the federal, state, and local level • Support reciprocal trade activities
6 Create demand-driven and targeted workforce development	• Enable employers to articulate needs more precisely into the workforce system • Guide providers and educators to create demand-driven curricula, programming and counseling that clearly leads workers to long-term, sustainable careers • Enable demand-driven information and data in an easily digestible and usable format to guide educational and career decisions of institutions and workers • Produce and retain more graduates in engineering and technical fields by increasing the quantity and quality of applied science institutions, building interest in the fields, and providing connections to jobs and entrepreneurial activity

Exhibit 7 Continued

10 Transformative Strategies for Chicago's Economic Growth (2/2)

	Strategy	Core Elements
7	Foster innovation in mature and emerging sectors and support entrepreneurship	• Build on recent entrepreneurial momentum by expanding formal and informal networks that connect entrepreneurs with customers, venture capital, and mentorship opportunities • Implement more targeted, cluster-based initiatives to extend and deepen Chicago's competitive advantages in strategic economic sectors through innovation • Facilitate stronger connections between academic research and private industry to promote higher rates of innovation in existing firms and increase industry-driven university R&D and commercialization
8	Invest to create next-generation infrastructure	• Identify and prioritize the investments with the greatest potential to advance the region's goals (e.g., transit improvements, smart technologies to reduce congestion, energy efficiency investments, fiber-optic backbone, etc.) • Create innovative, merit-based infrastructure financing systems that support transformative investments as well as maintenance and operations
9	Develop and deploy neighborhood assets to align with regional economic growth	• Nurture neighborhoods that foster continuous development of talent, businesses, and real estate assets. • Enable the emergence of mixed use communities that attract and serve residents with convenient transportation, robust communication networks and vital markets. • Design policies and programs that enable neighborhoods to leverage their unique economic assets that specifically support the strength and growth of small- and medium- size enterprises (SMEs), minority- and women- owned enterprises (MBE/WBEs) and Business Enterprises owned by People with Disabilities (BEPD).
10	Create an environment and processes that allow businesses to flourish	• Reduce fragmentation and improve inter-governmental coordination and cooperation • Facilitate a more open and accessible business climate by engaging residents and firms more directly in governance and fostering cross-sectoral engagement • Enable clearer accountability and transparency through public performance metrics and tracking • Streamline basic support processes (permitting, licensing)

Strategy 1: Become a Leading Hub of Advanced Manufacturing

Chicago can preserve its competitiveness in manufacturing, a key component of the region's economy, by capitalizing on the shift into high-tech products and processes underway in the manufacturing sector nationwide. Advanced products and processes preserve U.S. manufacturing competitiveness and help create high-quality jobs. Chicago's massive manufacturing base and historical strength in the sector positions it well to move into advanced manufacturing, by introducing advanced technologies and processes and developing the right workforce to operate them. This entails the deep engagement of different manufacturing industries. We need not only to understand their specific needs in innovation, technology, and human capital, but also to support their efforts to become more competitive or redeploy assets as needed. An emphasis on advanced manufacturing would fundamentally transform a core part of the region's overall economy by increasing overall productivity and linking skilled workers to high-wage jobs.

The key components of this strategy are:

- Accelerate growth in advanced manufacturing industries in which Chicago specializes (e.g., those with an LQ greater than 1).
- Help low-growth legacy manufacturers to repurpose assets and adopt advanced technologies.

- Expand workforce training programs to give workers the skills that manufacturers seek (but struggle to find).
- Make a clear commitment to support the region's manufacturers, in word and deed, through initiatives and more consistent and efficient zoning, permitting, and other business processes.

The case for a shift toward more advanced technologies has been made by a number of efforts around the world. Germany's Fraunhofer Institutes, a federated system of approximately 60 applied research centers, have been extremely successful in this regard, providing research, incubation, consulting and networking services to accelerate innovation.[119] Further lessons can be taken from the examples of Taiwan's Industrial Technology Research Institute,[120] and the history of North Carolina's Research Triangle Park, which includes rapid-growth industrial and innovation activity anchored around high-profile multinational corporations.[121]

Existing Initiatives Relevant to Strategy 1[122]

In Chicago and the region, many organizations and activities address selected needs of manufacturers, and deserve support as they further the aims of this strategy. For example, The Illinois Manufacturing Extension Center (IMEC) seeks to provide general assistance to manufacturers as it ramps up technical assistance work in the Chicago region and the City of Chicago's Sustainable Industries initiative is identifying better ways to streamline City services to manufacturers and to manage City industrial corridors.

A number of organizations are also beginning to address manufacturers' expressed need for skilled workers. The Chicago Manufacturing Renaissance Council (CMRC) has partnered with the Chicago Public Schools to create Austin Polytechnic Academy, the first high school in the nation to afford its graduates NIMS certification. CMRC has also proposed an Austin Manufacturing Innovation Park, which would combine R&D and training facilities based on European models. Along I-90 in the vicinity of Hoffman Estates, precision manufacturers are starting to partner with high schools, Harper Community College, and municipal economic development officials to provide training and internships, and to promote manufacturing careers.

In the life sciences, the region has several innovation parks and incubators that are housing a variety of life science start-up companies. These include a new incubator managed by Wexford at the Illinois Institute of Technology, the Illinois Science and Technology Park in Skokie, and the Chicago Technology Park in the Illinois Medical Center District west of downtown. The statewide iBio organization has an extensive series of programs to support growth of the life sciences cluster, ranging from mentoring entrepreneurs through its PROPEL programs, to initiatives for improving high school science teaching, to legislative advocacy strategies. Northwestern University has spawned a number of local companies focused on nanotechnology, some of which are housed along with the national NanoBusiness Alliance in the Skokie technology park.

Strategy 2: Increase the Region's Attractiveness as a Center for Business Services and Headquarters

Metropolitan Chicago has a large and strong functional cluster of headquarters and business services, and it is important to keep it thriving. The region should aim to be the location of choice for the headquarters of U.S., North American, and emerging global companies, and the place where cutting-edge business

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119 *See, e.g. http://www.fraunhofer.de/en/.html*

120 *http://www.itri.org.tw/eng/*

121 *Research Triangle Foundation; Compete.org*

122 *As mentioned above, each strategy section includes examples of relevant existing initiatives. These summaries are not meant to be comprehensive, but rather to acknowledge the range of important work already going on with respect to the strategy, which should be supported and informs development of specific initiatives.*

services are being developed and provided. The Chicago region has a particular strength in advanced business services that support company headquarters, including insurance and risk management, scientific research, law, finance and consulting. The presence of these high-end service providers is a primary competitive advantage for attracting and retaining headquarters. For the cluster to flourish, the region's overall business climate has to actively support it. Firms in this cluster are knowledge-intensive and dynamic, and the local environment should be receptive and flexible in responding to their changing needs in areas such as government regulation and physical and virtual infrastructure.

There are many ways we can work to enhance the performance and value-creation potential of this sector. The key components of this strategy are:

- Develop the right array of service firms to support the needs of headquarters in the future. These needs include cloud computing, management and analysis of "big data," energy-efficient building management, and logistics technologies. The survival and success of firms in some service areas will also require ongoing innovation.[123]
- Support the region's existing companies through proactive outreach to retain local headquarters and to encourage the expansion of corporate functions and capacity within Chicago.
- Work to attract U.S. companies considering relocating corporate headquarters or other corporate functions, or expanding facilities such as R&D sites.
- Position Chicago as the location of choice for global companies seeking to establish North American headquarters, for example by continually developing and promoting our capacity to provide advanced business services, fostering close ties with business development organizations of key trade partners, and targeting outreach to relevant companies.

Two examples in particular provide some lessons relevant to Chicago. The Portland Development Commission of Portland, Oregon, supports key regional clusters by prioritizing investment in asset clusters, nurturing collaboration with higher education and business partners, developing predictable funding, and partnering with city and state authorities to address impediments to business growth. Another example is the Singapore Economic Development Board, which administers a strategic program that has attracted thousands of companies from diverse industries and geographies over the last four decades.

Existing Initiatives Relevant to Strategy 2

WBC, along with many other economic development groups around the region, are currently engaged in efforts to attract and retain headquarters. They aid in site selection and help firms navigate various government processes. Several organizations are focused on IT-related business services innovation, including TechNexus as part of the Illinois Technology Association, and the Illinois Science and Technology Coalition. A number of entrepreneurship-focused support networks are also supporting innovation in business services, especially in the digital industries. The Chicagoland Entrepreneurial Center and the 1871 Chicago Tech Center promote mentoring and a downtown tech incubator/shared office space for start-up companies, while Built in Chicago serves as a virtual community for these companies.

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123 *Note that additional, more nuanced analysis of the region's headquarters and business services cluster will be necessary to better understand its dynamics and what concrete initiatives will enable its continued strong performance. Further national and global industry research is also needed to identify which specific "next generation" products, services, and technologies are the most compelling opportunities to develop, adopt, and disseminate.*

Strategy 3: Become More Competitive as a Leading Transportation and Logistics Hub

Chicago must make a priority of reducing congestion and repairing the aging infrastructure that is putting its transportation and logistics sector at risk. The region needs proactive investments in this sector. By removing current barriers and driving future growth, Chicago can maintain its strength particularly in freight and logistics, which is essential to the success of other regional industries, such as manufacturing. Targeted actions and investments, furthermore, will strengthen the region's location advantage for new businesses as a primary intermodal hub and logistics center.

The key components of this strategy are:

- Remove barriers to growth by reducing congestion and improving aging infrastructure. Possible examples include
- Reducing rail congestion through the projects of the Chicago Region Environmental and Transportation Efficiency Program (CREATE) and related projects, which will require increased public and private financial support.
- Reducing highway congestion through measures outlined in the CMAP GO TO 2040 Plan, including increased public transit, congestion pricing, and select road improvements, especially in the area around O'Hare Airport.
    - Develop logistic parks in areas where rail activity is projected to increase, near communities whose populations need employment, and in areas that support manufacturing growth.
- Support the firms and industries that are poised to capture future innovations in the sector (e.g., technology-driven supply chain management, intelligent transportation systems[124]).
- Improve institutional capacity to plan and implement major improvements in transportation and logistics (e.g., proactive planning for the global repositioning of shipping patterns that will emerge with the expansion of the Panama Canal).

Existing Initiatives Relevant to Strategy 3

Many important initiatives currently promote Chicago's preeminence as a transportation and logistics hub. CREATE, overseen by six private freight railroads and three public agencies, encompasses a series of projects to reduce rail congestion. In the works since 2003, CREATE needs $3 billion to achieve its goals, but is less than one-third funded. The Illinois Department of Transportation is beginning to develop its first statewide freight plan. Metropolis Strategies and others have developed proposals for a freight authority that could ensure that priority investments are made according to a well-thought-out freight plan.

A number of programs under way support new intermodal opportunities in Chicago and suburban neighborhoods where populations need jobs. These include the "Green TIME[125] zone" proposal for the south suburbs, which has identified 1,300 acres appropriate for "cargo-oriented development" around the Canadian National (CN) logistics park in Harvey. There are plans for expanded rail facilities in the Englewood neighborhood, and the Chicago Department of Transportation has identified opportunities for rail-related manufacturing expansion in industrial corridors.

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124 *Defined as transportation systems that can be dynamically monitored and/or controlled through the use of information technologies incorporated into infrastructure and vehicles.*

125 *TIME = Transit, Intermodal, Manufacturing, Environment zone.*

And there are numerous programs in the planning stages such as the Elgin O'Hare West Bypass (costing $3.6 billion and partially funded) and a planned O'Hare Perishables Center, comprising facilities for shipping flowers and fresh food, which have the potential to improve freight throughout.

Strategy 4: Make Chicago a Premier Destination for Tourism and Entertainment

This strategy involves pursuing two types of efforts to grow the region's tourism, conventions, and entertainment cluster: "product development" initiatives to improve the region as a tourist destination, and marketing initiatives aimed at "selling the product."

A set of market-based "tourism and entertainment product" strategies for the Chicago region can enhance this promising sector's impact on jobs and GRP. Product development strategies should focus on particular segments of the travel market and develop a suite of destination products for each segment and sub-segment. Currently six public or quasi-public institutions play major roles in tourism promotion, with an additional four organizations promoting Chicago as a destination.[126] Strategic alignment or consolidation of some or all of these entities could better package the Chicago "product" and help achieve scale efficiencies in marketing investments.

Recent efforts to coordinate marketing activity across relevant organizations, such as the Chicago Convention and Tourism Bureau (CCTB) and the Department of Cultural Affairs and Special Events (DCASE) are positive first steps. Relatively low-cost investments, such as opening visitor offices in key international markets or increasing marketing and guidance for tourists in Chicago's airports, can yield high returns.

The key components of this strategy are:

- Reduce fragmentation and increase coordination of investments in tourism promotion, governance, marketing, and outreach.
- Pursue product development programs to enhance the aspects of the region that appeal to particular visitor segments. These programs directly create value in the City, growing the industries that serve tourists and making Chicago a more attractive place to visit.
- Improve the region's tourism and entertainment infrastructure. Enhancing the region's transportation systems, including their appearance and overall "visitor-friendliness" (e.g., multi-lingual resources), can positively affect the travel decisions of both leisure and business travelers.
- Improve the convention and business travel experience with more competitive and improved services.
- Increase investment in strategic marketing and promotions.

Existing Initiatives Relevant to Strategy 4

Many efforts are currently under way to support the tourism and entertainment cluster, including the ongoing initiatives of the CCTB and the Metropolitan Pier & Exposition Authority (McPier). Considerable energy has been generated to support CCTB's refocused advertising campaign, for example. Upon taking office, Mayor Emanuel merged two departments to create the Department of Cultural Affairs and Special Events (DCASE). DCASE will soon complete the first Chicago Cultural Plan since 1986, and CCTB and the Chicago Office of Tourism and Culture have just approved a merger and consolidation.

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[126] *Civic Consulting Alliance analysis of Chicago tourism promotion governance structure.*

Strategy 5: Make Chicago a Nationally Leading Exporter

A major opportunity exists that cuts across Chicago's economic sectors: expanding its strong export base to meet rising demand in emerging markets. The Chicago region should aspire to become the nation's leading exporter. Given expectations of sluggish domestic consumption, rising economic growth in emerging markets, Chicago's compelling export landscape, and a supportive regulatory climate spurred by the Federal Government's intention to double exports by 2015, the Chicago region can accelerate growth in this vital arena. An export strategy for the region – particularly focused on SMEs, in not only manufacturing but also critical business services sectors – can orient the local economy to meet rapidly expanding global demand at significant scale, and could meaningfully alter the pace and trajectory of the region's economic growth.

The key components of this strategy are:

- Develop a consistent strategy for the region's exports to better identify the right opportunities and markets.
- Focus on supporting exports by the region's numerous SMEs, which face greater challenges to exporting than larger companies do.
- Connect and engage firms of various sectors, sizes, and stages of export-readiness by providing general expertise, links to resources, and one-on-one support and mentoring.
- Develop a capacity to better leverage existing resources at the federal, state, and local level.
- Support reciprocal trade activities.

Examples of successful export-promoting models include broad-scale programs such as International Enterprise Singapore, which employs 500 staff across offices in 30 countries and has assisted over 66,000 companies with their export plans, as well as targeted programs such as the San Francisco Center for Economic Development's ChinaSF office, which provides direct customer contacts by leveraging an extensive network of relationships through the local Chinese immigrant business community.

Existing Initiatives Relevant to Strategy 5

In principle, Chicago-area SMEs that export or aspire to do so can turn for help to many export-related resources at the federal, state, and local levels. But in fact, SME exporters often face difficulties tapping into these resources. At the federal level, the Department of Commerce's International Trade Administration (ITA), Foreign Commercial Service, and International Trade centers offer global networks of trade specialists posted in Chicago and at embassies and consulates in over 77 countries overseas to educate and accelerate exports. The Export-Import Bank provides exporters with financial products to mitigate export risk, and the Small Business Administration helps local businesses develop their export capacity through Small Business Development centers such as the one located at Chicago State University. Through Study Illinois, the ITA has enabled an international consortium of Illinois educational institutions to pool their resources and market their programs internationally. In the 2009-2010 academic year, this program attracted more than 30,000 international students to study in Illinois, generating $869 million in education exports.

At the state level, the Illinois Office of Trade maintains nine regional overseas offices, while also reaching out to industry at home; its 2011 conference on exporting attracted more than 200 firms. At the local level, volunteer organizations such as the Chambers of Commerce, the Chicago International Trade Commissioners Association, and other organizations continue to foster acquisition of overseas contacts and export education for firms in the Chicago area.

Importantly, there are likely many positive economic benefits to other international trade, including imports into the region and attracting foreign direct investment (FDI). FDI in particular could have an effect across other strategies as well. The Chicago Council on Global Affairs has launched a comprehensive effort to study this in detail and develop strategies to draw more FDI to Chicago and the region.

Strategy 6: Create Demand-Driven and Targeted Workforce Development

As Chicago's economy shifts toward new industries, displaced workers need help matching skills to existing jobs and accessing targeted training and certifications for new jobs. Educational providers need better information about emerging jobs and their skill requirements, and employers need a better system for finding, evaluating, and arranging job-specific training for prospective employees. To meet the economic goals outlined in the Plan, there needs to be a supply of talent that matches the demand of the Chicago region's diverse industrial base, and workers and firms must be matched efficiently. The ultimate goal is to enable the workforce system and labor markets to more efficiently and effectively meet the needs of employers in the next economy.

The key components of this strategy are:

- Enable employers to articulate needs through simple entry points into the workforce system.
- Guide providers and educators to create demand-driven curricula, programming, and counseling that clearly leads workers to sustainable careers.
- Provide demand-driven information and data in an easily digestible and usable format to guide educational and career decisions of institutions and workers
- Produce and retain more graduates in engineering and technical fields by increasing the quantity and quality of applied science institutions, building interest in the fields, and providing connections to jobs and entrepreneurial activity.

Case examples outside Chicago can help inform initiatives to meet these strategies. Positively Minnesota is known as having one of the best labor market information board in the country, owing to its combined offering of public data and employer surveys. Additionally, Cleveland's Employment Connection has successfully connected 2700 unemployed workers directly to jobs in the last year.

Existing Initiatives Relevant to Strategy 6

Currently, many initiatives in Chicago focus on expanding the use of demand-driven data and relationships to guide programmatic and curricula decisions. Among the many provider examples are Chicago Career Tech, the City Colleges Reinvention effort, Metropolitan Chicago Healthcare Council's Healthcare Workforce Institute, Instituto del Progreso Latino's Health Sciences Careers Academy and Manufacturing Works program, and the newly created Chicagoland Workforce Board. The Illinois Technology Association has a number of programs aimed at recruiting and retaining technologically skilled graduates of Illinois colleges and universities and matching employers with skilled prospective employees.

Chicago has several prominent higher-education institutions that graduate students with advanced degrees in applied sciences and engineering such as Northwestern University, the University of Illinois at Chicago, and the Illinois Institute of Technology.

A number of organizations, ranging from school systems to non-profit organizations like the iBio Institute, are also working to improve the level of primary and secondary school STEM teaching.

Strategy 7: Foster Innovation and Support Entrepreneurship

Chicago must build on today's considerable momentum in capturing innovation through entrepreneurship, especially in the high-tech and web-based industries. Other emerging markets and industries, such as clean technology, present opportunities for rapid growth through innovation, as existing firms and entrepreneurs begin developing products and services in these sectors. Furthermore, Chicago should help its mature industries to accelerate their rates of innovation and new technology adoption, and support its largest research institutions to better align their R&D agendas with industry needs.

Three distinct but related steps will promote and enable greater levels of innovation throughout the regional economy. These key components of this strategy are:

- Build on recent entrepreneurial momentum by expanding formal and informal networks that connect entrepreneurs with customers, venture capital, and mentorship opportunities.
- Implement more targeted, cluster-based initiatives to extend and deepen Chicago's competitive advantages in strategic economic sectors through innovation.
- Facilitate stronger connections between academic research institutions and private industry, to promote higher rates of innovation in existing firms and increase industry-driven university R&D and commercialization.

The different components of this strategy are mutually reinforcing. A richer entrepreneurial ecosystem may enable innovation through entrepreneurship in strategic clusters, while cluster-based initiatives may facilitate the commercialization of some academic research. Each of these components would benefit from their own focused, targeted initiative.

An informative example from another region is San Diego Connect, which has been extremely successful in fostering strong networks among entrepreneurs, small businesses, academic research institutions, and established industries. Since its establishment in 1985, it has helped create more than 3000 companies that have attracted over $10 billion of investment capital.

Existing Initiatives Relevant to Strategy 7

A variety of existing institutions in Chicago are already working to achieve similar entrepreneurship goals, and this strategy aims to build on the progress they have enabled in recent years. The University of Chicago's Polsky Center for Entrepreneurship, Northwestern's Levy Institute for Entrepreneurial Practice, and DePaul University's Coleman Entrepreneurship Center, to name a few, provide guidance, mentorship, and early-stage financing to innovative entrepreneurs. The Chicagoland Entrepreneurial Center and Excelerate Labs connect emerging entrepreneurs to financial resources, formal coaching, and rich informal networks of peers. The region's entrepreneurship ecosystem is particularly robust in the high-tech industry, where organizations such the Illinois Technology Association's TechNexus work to incubate and accelerate high-tech innovation through entrepreneurial efforts. The newly formed 1871 Chicago Tech Center promises to be a robust incubator for digital start-ups and entrepreneurs.

A growing number of organizations are also promoting innovation and growth in Chicago's emerging industries. The Clean Energy Trust provides early-stage business development support to clean energy start-ups, while the Mayor's Green Ribbon Committee and Energy Impact Illinois both promote adoption of sustainable, energy efficient technologies in the City and State.

Strategy 8: Invest to Create Next-Generation Infrastructure

To secure a competitive position in the next economy, the Chicago region needs to invest in the next generation of infrastructure; transit, water, energy and virtual infrastructure. Such investments will allow people, ideas and goods to flow more efficiently and concentrate where they can do the most good. Improved infrastructure will better link people and neighborhoods to opportunity more effectively; support innovation with advanced technologies; enable much more efficient energy and resource management; and increase the speed and power of information and data flow.

There are two key components to this strategy of delivering transformative infrastructure:

- Identify and prioritize the investments with the greatest potential to advance the region toward the next economy. These include, for example:
    - Transit infrastructure: Major transit system upgrades and expansion; investments in rail, roads and new intermodal and manufacturing hubs that both sustain Chicago's international freight leadership and contribute to its GRP and productivity growth; new mixed-use, transit-oriented residential developments;
    - Water and sewage infrastructure: renovating Chicago's network of water and sewage mains;
    - Energy infrastructure: Energy efficiency investments, from City-wide retrofits to shared neighborhood energy platforms;
    - Smart technologies that reduce congestion; a fiber-optic backbone with universal access that speeds the flow of information; "smart city" information and engagement platforms;
    - Combinations of the above infrastructure investments: Specialized infrastructure and technology assets serving schools, libraries, research parks, industrial innovation centers, and advanced education facilities, among others.
- Create innovative, merit-based systems to finance infrastructure, supporting transformative investments as well as maintenance and operations. Systems for planning and financing capital investments can only be effective if they identify and acquire new sources of capital; prioritize infrastructure investments that further the goal of economic growth; and are transparent, accountable and performance-driven.

Existing Initiatives Relevant to Strategy 8

A number of infrastructure-related initiatives are currently either in the planning stages or are partially completed, but most of them do not have adequate funding in place. Examples include the CREATE program to reduce rail congestion, a pilot rapid-transit bus project along major corridors on the West side, and improvements to the CTA transit lines. The Chicago Metropolitan Agency for Planning has also proposed a number of capital projects that do not yet have the requisite funding to move forward.

Many efforts to expand the virtual infrastructure of Chicago and Illinois are under way, including several initiatives of the Chicago Department of Innovation and Technology's (DoIT) Digital Excellence Agenda, which seeks to extend high-speed network access to more Chicago communities. As part of his initiative to replace Chicago's aging water infrastructure, Mayor Emanuel proposes laying fiber optic conduit each time ground is broken to replace water mains. The International Center for Advanced Internet Research, housed at the Chicago campus of Northwestern University, works with research partners around the world to develop next-generation communication technologies and applications. And the State of Illinois has for years been committed to expanding core fiber optic infrastructure to community anchor institutions throughout the state. In October, Governor Quinn announced that the State will lay more than 70 miles of fiber optics in the South Suburbs, providing affordable, high-speed network access to that part of the region.

In addition, Mayor Emanuel has embraced aggressive plans for energy efficiency and retrofitting buildings. Further efforts in support of energy efficiency include the Chicago Metropolitan Agency for Planning's Energy Impact Illinois initiative, a DOE-funded platform that facilitates energy retrofits for residential, commercial, and industrial buildings. CNT Energy runs Energy Savers, which helps multifamily residential building owners make their buildings more energy efficient by providing technical assistance, low-cost financing, construction oversight, and performance management. Local utilities also provide incentives to encourage home/building owners to purchase energy efficient products and undertake retrofits.

Strategy 9: Develop and Deploy Neighborhood Assets to Align with Regional Economic Growth

Neighborhoods serve two functions critical to regional economic growth: they produce and incubate assets – people, networks, real estate, businesses and institutions – and they facilitate their deployment into regional systems. Neighborhoods that perform these roles well improve their residents' prospects and contribute to the region's productivity. In contrast, neighborhoods that are unsuccessful in developing or deploying strong assets are at risk of isolation and concentrated poverty, wasting resources and dragging down the region as a whole. To prepare for the next economy, Chicago will need to reconfigure its urban growth form and invest in neighborhood assets that prepare us for the next economy. This means, for example, favoring mixed-use and mixed-income communities with access to transit, extending broadband access to lower income neighborhoods, developing advanced education centers, and developing industrial land more customized to particular types of firms or clusters and better connected to neighborhoods.

To promote strong, well-connected neighborhoods that enhance regional growth, the key components of this strategy are:

- Nurture neighborhoods with high "quality and vitality of place," supporting continuous development of human capital, business and real estate assets.
- Connect neighborhood assets to regional systems, by increasing access to physical and virtual infrastructure (e.g. transit connections or broadband service) and enabling better connections to labor, business, financial and other markets.
- Design policies and programs that support the emergence of mixed-use communities that help end poverty and allow residents to work, live, learn, and shop in close proximity to transportation facilities.

Existing Initiatives Relevant to Strategy 9

Many important initiatives are already addressing Chicago's need to deploy neighborhood assets aligned with regional economic growth. The LISC New Communities program, funded by the MacArthur Foundation, invests in 16 Chicago neighborhoods to implement quality-of-life plans that include housing, access to employment, and transit-oriented development. Chicago has scores of community development organizations working on neighborhood revitalization at multiple levels – from assisting with industrial retention and developing stronger school-community relationships to investing in urban agriculture, retail strip and housing revitalization.

One of the most ambitious plans to transform a brownfield site into a new neighborhood is the "South Works" plan, which calls for the redevelopment of the 470-acre former U.S. Steel plant site on Chicago's South Lakefront into a community of 50,000 new residents with 17.5 million square feet of retail and commercial space, a high school, new parkland, and a 1,500-slip marina.

Regional organizations such as the Metropolitan Planning Council (MPC) and Center for Neighborhood Technology (CNT) sponsor many programs to help revitalize communities, including employer-assisted housing, neighborhood planning assistance, and proposals for transit-oriented-development (e.g., rapid bus lines). The Smart Chicago Collaborative, a project of the City of Chicago, the MacArthur Foundation and the Chicago Community Trust, supports broadband access and digital empowerment in low-income neighborhoods. Finally, Chicago Sustainable Industries, a project of the Department of Housing and Economic Development, is updating the City's strategy for industrial land use, infrastructure, and assistance for the first time in more than a decade.

Strategy 10: Create an Environment in which Businesses Can Flourish

Many strategies articulated here rely at least in some form upon the critical precondition of a supportive environment for businesses. In order to build on the Chicago region's active civic community, and its deep engagement across sectors, we need to knock down barriers that still hinder the growth of such an environment. These include State and local fiscal uncertainty, and an administrative culture that is perceived as bureaucratic and opaque. Direct improvements are needed throughout the region to reduce fragmentation, improve tax investment decisions, and work more efficiently with businesses. It is also important to remember that small and medium-sized enterprises, which play a major role in the region's economy,[127] are often most directly affected by a challenging business environment and culture. At a minimum, removing basic process barriers (e.g., time lags in permitting, duplicative inspections) will be critical to accelerating growth in these businesses and thus enhancing the overall efficiency of the regional economy. Improved efficiency in governance will also free up revenue that can be invested to further other strategies.

The key components of this strategy are:

- Reduce fragmentation and improve inter-governmental coordination and cooperation to provide a greater return on public investment.
- Facilitate a more open and accessible business climate by engaging residents and firms more directly in governance (through, e.g., self-permitting, community policing) and fostering cross-sectoral engagement among private, civic, and public entities.
- Create clearer accountability and transparency through public performance metrics and tracking.
- Streamline basic support processes (permitting, licensing) for businesses through, e.g., one-stop web-based services.
- Reconcile fiscal imbalances and strive for an improved clear tax value proposition.

Existing Initiatives Relevant to Strategy 10

Much work in this area is already under way, and the Plan for Economic Growth and Jobs supports Chicago's efforts to improve public services, rationalize business regulations, and reduce fragmentation through collaboration with other units of government in the region. In August, the TIF Reform Panel appointed by Mayor Emanuel released its recommendations for making Chicago's hallmark economic development tool more strategic, deliberate, and transparent. A $6 million, 3-year grant from Bloomberg Philanthropies has launched "Innovation Delivery Teams," designed to streamline City services. Federal funds have enabled the Department of Housing and Economic Development to begin the Chicago Sustainable Industries initiative, which for the first time in more than a decade will update the City's strategy for industrial land use, infrastructure, permitting, and assistance.

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[127] *As noted previously, over 90% of all of Chicago's businesses employ fewer than 500 workers. U.S. Census Bureau, 2009.*

In the past year, Chicago-Cook County collaborative initiatives have identified cost-saving measures in more than 20 areas, including facilities maintenance, custodial services, IT support, and procurement. This ongoing work has recently culminated in the announcement of the consolidation of Cook County's and Chicago's workforce boards, which aim to reform and revitalize workforce development throughout the region.

On a regional scale, the Chicago Metropolitan Agency for Planning (CMAP) provides a seven-county perspective and facilitates collaboration and information sharing among local governments. Its Metropulse data system, which is being continually expanded, provides government data that is useful for benchmarking and promotes informed decision making. This information system can be a starting point for intergovernmental collaboration through data sharing, and merits a close look as an example of how to build city and regional partnerships.

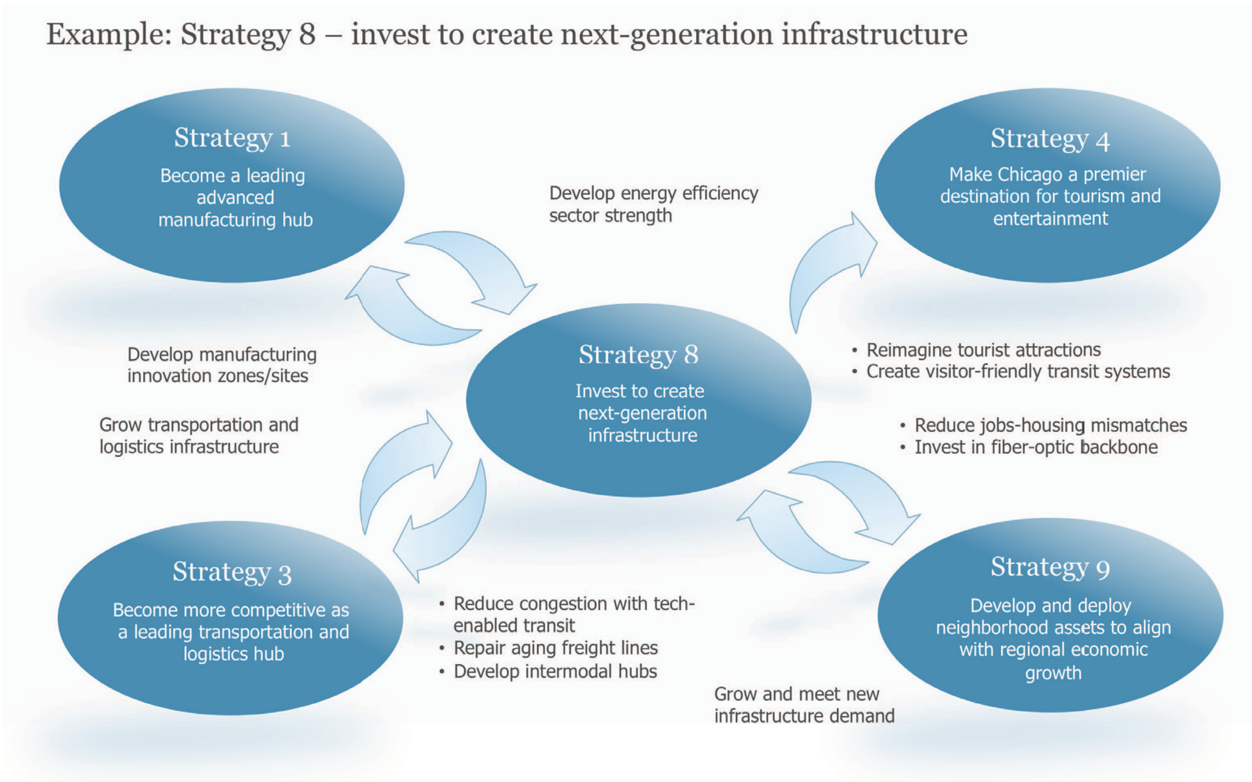
Creating a public and civic institutional environment to attract investment and foster the creation of new firms is a long-term process. It will require continued systems reform, adaptation to changing conditions, openness, flexibility, and collaboration. Public officials and private-sector leaders committed to reform can lead the way by continuing to reinvent public and civic institutions with meaningful and sustained initiatives like those listed here.

Strategies are Mutually Reinforcing

Each of the 10 strategies discussed above has been designed to foster economic growth if pursued individually. Each, furthermore, has been created to enhance, align with, and/or incorporate the many ongoing efforts also mentioned in the discussions. Taken together, however, the 10 strategies align with each other and are mutually reinforcing. Concerted forward motion on several strategies or all 10 will yield important synergies and create a greater overall effect (Exhibit 8).

Exhibit 8

Strategies are Mutually Reinforcing



Strategy 8 offers just one example of how the 10 strategies interconnect and achieve synergies. The strategy of investing to create next-generation infrastructure also serves as a vehicle for improvements to the built environment across several other strategies. The funding of investment in an innovation park or similar facilities, for instance, would support Strategy 1 (Become a leading advanced manufacturing hub) and Strategy 7 (Foster innovation in mature and emerging sectors, and support entrepreneurship); creating new and consistent funding streams for major transportation and logistics investments, including both inter-regional and intra-regional transit, supports Strategy 3 (Become more competitive as a leading transportation and logistics hub); enhancing convention amenities, airport rapid transit, or other elements most valued by tourists strengthens Strategy 4 (Make Chicago a premier destination for tourism and entertainment); and funding major neighborhood transit and broadband access supports Strategy 9.

Similar synergies can be demonstrated across all 10 strategies. Together, they could fundamentally change Chicago's growth pace and trajectory by increasing the productivity of its assets, and developing the right nexus of human capital, technologies, and industries for the next economy.

4. Opportunity for Impact and Risks

Potential Impact

The purpose of the Plan for Economic Growth and Jobs is to enhance and accelerate the growth trajectory of the Chicago region. Several metrics can be used to gauge economic growth, including GRP, productivity, employment, median income, average wages, and GRP per capita. For this analysis, the two primary economic metrics used are employment and GRP. From 2000 to 2010, the Chicago region's employment decreased by 0.7% CAGR (from 4.6 million to 4.2 million) and GRP grew at 0.8% CAGR (from $412 billion to $443 billion)[128]. In comparison, the United States saw its employment drop by 0.2% and its GDP grow by 1.6% in the last decade.[129]

Estimating the long-term potential of the Plan against these metrics is a challenge, given the extensive influence of global factors and other externalities that come into play over time. Monitoring the Plan's implementation, however, will be critical to ensure that its strategies lead to transformational as well as incremental impact on the region's economy. While the time to impact, type of impact, and overall contribution to growth will vary for each of the strategies, the strategies taken together clearly have the opportunity for a transformative impact on Chicago's GRP and employment in the future (Exhibit 9).

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[128] *Real GRP in 2005 adjusted dollars; does not include government spend. Source: Moody's Analytics analysis of BLS and BEA data.*

[129] *Moody's Analytics projections as of December 2011.*

Exhibit 9

Each Strategy has the Potential for Transformative Impact if Chicago Closed Gaps to be Best in Class

	Strategy	Potential
1	Become a leading advanced manufacturing hub	Closing the gap in advanced manufacturing to best-in-class growth (Houston) could lead to 5,000-9,000 jobs and $7 bn-15 bn in GRP
2	Increase attractiveness as a center for business services and headquarters	Closing the gap in business services to best-in-class growth (Austin) could lead to 40,000-80,000 jobs and $5 bn-13 bn in GRP
3	Become more competitive as a leading transportation and logistics hub	Closing the gap in freight and logistics rankings and cut trucking congestion by 25-50% could result in 20,000-25,000 jobs and $1.5 bn-2 bn in GRP
4	Make Chicago a premier destination for tourism and entertainment	Improving marketing efforts to benchmark-city levels (NYC, Philadelphia, San Francisco) could produce an additional $3 bn-4 bn in GRP and 30,000-40,000 jobs
5	Make Chicago a nationally leading exporter	Doubling exports from small and medium businesses could produce an additional $16 bn-22 bn GRP and 160,000-200,000 jobs
6	Create demand-driven and targeted workforce development	Placing half of the unemployed mid-skilled workers (81,000 jobs) would reduce unemployment to 8%. Achieving the City's best-ever unemployment rate (4% in 2000) would mean the creation of 130,000 additional jobs
7	Foster innovation in mature and emerging sectors and support entrepreneurship	Capturing "big data" and analytics innovation in some of Chicago's large sectors – healthcare, manufacturing, and retail – could produce an additional $5 bn-9 bn in GRP and 50,000-90,000 jobs
8	Invest to create next-generation infrastructure	A total infrastructure investment of $2 bn-5 bn could create an additional $2 bn-13 bn in GRP and 12,000-75,000 jobs
9	Develop and deploy neighborhood assets to align with regional economic growth	Reducing unemployment in inner city areas by 25-50% would mean adding 15,000-25,000 additional jobs, which would create $1.5 bn-3.0 bn in GRP
10	Create an environment and processes that allow businesses to flourish	Closing the gap in job growth for small and medium-sized businesses at best-in-class levels (Austin, 1.3%) could create 140,000-280,000 more jobs1

1 Achieving these results assumes the effect of multiple strategies acting together; Strategy 10 alone could account for as much as half this growth

While top-line economic growth is seen directly in terms of employment and GRP, the impact of the Plan for Economic Growth and Jobs extends beyond these metrics. The combination of strategies can improve Chicago's competitiveness in other sectors beyond those we focus on here, such as healthcare, retail and trade. Accelerated innovation and entrepreneurship, next-generation infrastructure, and demand-driven workforce development can lift up and improve competitiveness in all of Chicago's sectors. The combination of strategies can also reverse challenging historical population trends, renewing the appeal of the region, and of the City itself, as a place where people and businesses want to be located. Chicago can revitalize its neighborhoods with new infrastructure and linkages, and enliven its urban center with new job and business opportunities. Chicago can not only advance its position as the regional "magnet" of the Midwest, but also enhance its role as a truly global megacity in the new economy. It can become the place where global businesses choose to be when they enter U.S. markets, where people from around the country and the world can find a great place to live, where key sectors – including advanced manufacturing and next-generation business services – can grow and thrive on the world stage, and where innovation can accelerate faster than before.

The impact of the Plan for Economic Growth and Jobs will be felt across all communities, skill levels, and income levels. For example, progress can be made in addressing the mismatch between training curricula and industry demand, and e enhanced information can be provided to enable workers to find jobs with their existing skills or to retrain them for new in-demand positions. Chicago's low-income neighborhoods can benefit from improved transit linkages in their communities, and from the growth of mixed-income, mixed-use residential and commercial developments. Export support and streamlined processes can accelerate growth for small- and medium- sized businesses. Targeted sector-specific training (e.g., in advanced manufacturing), supports high-skilled job creation and provide better access to higher-wage opportunity for the medium-skilled. High-skilled job creation is also fostered by innovation-focused strategies, and lower-skilled, entry-level job opportunities can grow through infrastructure activity and growth in sectors such as tourism and entertainment. In addition to improving GRP, employment, and productivity, the Plan promises to have a significant impact on average wages and median household income, ensuring that all Chicago residents benefit from these strategies.

Risks to the Plan for Economic Growth

The transformative potential of the strategies laid out in the Plan for Economic Growth and Jobs are undeniable, but account must be taken of several risks that may impose constraints on individual initiatives. These risks are not specifically addressed here, but the Plan fully recognized that without positive developments within each risk area, the Plan's ability to achieve its potential will be impaired.

- **Illinois' fiscal situation.** Illinois has significant fiscal imbalances, particularly in regard to pension liabilities. If this barrier is not lowered, critical funding for the transformative investments described in the Plan will be lost, and an associated and paralyzing uncertainty for businesses would drastically limit the Plan's potential impact on growth.
- **Lagging public education.** The region's public education performance, from preschool through college, has lagged national performance for decades. Illinois' black-white achievement score gap of 33% is one of highest in the country, and the State's growing Latino population also has lower educational attainment levels than whites.[130] A highly educated workforce, and an effective pipeline to provide it, are vital to the Plan's success; achieving this will mean removing the racial and ethnic barriers in education while improving the quality of public education for all.
- **Perception of a tax environment that impedes stakeholder buy-in.** Despite Illinois' comparatively average corporate tax and sales tax rankings, residents and businesses are concerned these fiscal imbalances will lead to future tax increases and may feel that they are not getting value for the taxes they do pay, if governing bodies cannot successfully implement economic and political reforms.[131] Without clear and purposeful government action, the existing corporate tax and regulatory environment could become disincentives to move to or grow in Chicago.
- **Significant fragmentation and decentralization of decision-making.** There are 1,723 units of government just within the 14-county metro area, and economic development activity is highly fragmented across more than 100 organizations.[132] Making key growth decisions for the region may be a challenge given the many entities involved.
- **Leadership and funding of specific initiatives coming out of the Plan.** Many initiatives will require some level of funding, and all will require clear and dedicated leadership; existing capacity and funding limitations may pose a risk.

For Chicago to recognize its full potential from the strategies outlined in the Plan for Economic Growth and Jobs, the above risks will need to be taken into account and ideally reduced. There are additional preconditions for success, which, as mentioned earlier, are not directly addressed in the Plan: a strong K-12 education system, a high overall quality of life, strong public safety, and adequate access to healthcare for the region's residents are all critical core enablers for basic economic growth. This does not mean that execution of the strategies or launching of initiatives is predicated on all risks listed above being addressed

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[130] *National Center for Education Statistics, 2009.*

[131] *Illinois' corporate tax and sales tax rankings appear at about the middle of the 50 states, somewhat lower than high-tax peer states like New York and California: Tax Foundation, 2011.*

[132] *Metropolis Strategies analysis.*

in advance; however, it is important to acknowledge these risks to ensure that the Plan’s full potential for impact can be captured.

5. Implementation Approach

Ongoing Institutional Capacity and Accountability

Institutional Capacity

Economic growth planning is not a one-time project, but an ongoing approach to assessing and managing the regional economy. The Plan is a living, ever-evolving process that requires market analysis, strategy identification, initiative development, and implementation on an ongoing basis.

WBC invites all of the region's stakeholders to regard this draft of the Plan for Economic Growth and Jobs as a beginning moment in the planned growth and coordinated action of the Chicago region to 2020 and beyond. The strategies it comprises seek to make the region's existing assets more productive and better suited to the demands of the future, while also fostering growth of the new assets the next economy will require.

New institutional capacity is necessary to carry this work forward. Executing the Plan entails continuous and deliberate engagement in comprehensive development; nothing less will do if we are to implement these integrated and transformative strategies. The Plan's development process itself builds new institutional networks, collaborations, and partnerships, which in turn improves the capacity for governance of economic growth. The process has begun to create such networks already, and it will continue to do so. The activities of developing the content of the Plan and engaging stakeholders in it will be mutually reinforcing processes, enhancing each other iteratively.

- As stakeholders convene around particular challenges and opportunities, the quality of the Plan content will improve as additional market data, details and initiatives are surfaced.
- As new content is incorporated into the Plan, more stakeholders will engage in the efforts it outlines.
- As initiatives are implemented, stakeholders will engage and contribute to a more detailed market analysis and provide input to the broader strategies.
- Positive results achieved through implementing initiatives will attract additional stakeholders and generate additional initiatives.

Accountability

1. *Integration.* Economic growth planning is intended to create a whole greater than the sum of its parts. WBC will maintain the Steering Committee process and help to provide an element of leadership and centralized management needed to sustain the planning process as one of continual movement from the big picture to the details and back.

2. *Monitoring and refreshing.* It will be vital to keep track of progress toward the ultimate goals of economic growth, so that the course can be adjusted as necessary. WBC seeks to continually monitor overall progress. WBC and the Steering Committee will also lead the periodic revisions of the market analysis and the resulting strategies as the economy evolves, as additional information surfaces, and as additional stakeholders/partners become a part of the process.

3. *Stakeholder engagement*. The Plan will be shared with many stakeholders (e.g., City leadership, other civic organizations, leadership from around the metropolitan area, and, importantly, Chicago's residents and businesses). Deepening stakeholder engagement will provide input into the Plan as it is refined, as nuances and details from different organizations, sectors, geographies, and communities are incorporated. WBC and the Steering Committee will take the lead in communicating the Plan to the many groups and will work with stakeholders to continue to refine it. In this way WBC and the Steering Committee will enable coordination, consolidation, and integration within and across activities, to

maintain the inclusive nature of the Plan, and to continually forge new partnerships toward the region's growth.

Launching and Monitoring Initiatives

The launch of this draft of the Plan for Economic Growth and Jobs is at first accompanied by a period for comment and collaboration. However, it is ultimately the launch of specific initiatives to execute on the strategies that will determine the success of the Plan. Like the many existing initiatives related to economic growth, new initiatives will be owned by the appropriate leadership team, often outside of WBC and its Steering Committee (e.g., a team within the City, a civic organization, or a public-private partnership). The initiative leader(s) will develop business plans, raise resources, define milestones, lead implementation, and track progress for each initiative.

Initiatives will be reviewed to determine the extent to which they

- Lay the groundwork for truly "transformative" growth to make Chicago more competitive in the changing global economy;
- Are inclusive and ensure benefits to all segments of Chicago's society (in aggregate, not necessarily individually);
- Address the most prominent "gaps" in those of the 10 strategies that do not already have significant existing initiatives;
- Have
    - Clearly defined concepts, based on rigorous market analysis;
    - The ability to affect specific areas that can be influenced efficiently;
    - The ability to be implemented in the current fiscal environment;
- Have clearly defined leadership and accountability for implementation.

Next Steps: Initiatives

WBC and the City intend to use the Plan to build momentum and rapidly achieve progress. Some initiatives are already in process, and initiative leadership teams will begin developing coordinated efforts. Implementation leaders and partners will be formalized and detailed timelines and financial and operational plans will be developed.

The Plan in its present form – a first draft of what will be an ever-evolving Plan for Economic Growth and Jobs – will be communicated to different stakeholders and their feedback and input will become a source for further refinement and the identification of additional initiatives.

Beyond the next few months, World Business Chicago will continue to maintain and be accountable for the Plan. Detailed business planning and the launch of additional initiatives will take place, and the overall Plan will continue to be refined and revisited by WBC and its Steering Committee, in collaboration with all of the stakeholders of our region.

Conclusion

In recent decades, local and national economies have seen significant shifts and dislocations arising from structural trends. The new global economy that has emerged from these trends sets new parameters for success. More mature metropolitan centers can now flourish only by developing the dynamic, knowledge and technology-based sectors that make up the cutting edge of the economy. The benefits of rapid innovation, dynamic wealth creation, enhanced productivity and wages, and strong positioning on the global stage will flow to those regions where success is achieved. The Plan for Economic Growth and Jobs builds on the Chicago region's existing assets in order to ready the region's advanced sectors, infrastructure, businesses, and people for the future. The transformation has in fact already begun, in many diverse projects now under way. The Plan seeks to unite these efforts so that in the next decade, Chicago will be well on its way to realizing its potential as an economic powerhouse in the new global economy.

Glossary

BEA	U.S. Bureau of Economic Analysis.
BLS	U.S. Bureau of Labor Statistics.
CAGR	Compound annual growth rate.
CCTB	Chicago Convention and Tourism Bureau.
CMAP	Chicago Metropolitan Agency for Planning: the official regional planning organization for the northeastern Illinois counties of Cook, DuPage, Kane, Kendall, Lake, McHenry, and Will.
CMRC	Chicago Manufacturing Renaissance Council: a coalition of business, labor, government and community leaders working on policy reforms and practical projects that support advanced manufacturing in the nine-county Chicago MSA.
CREATE	Chicago Region Environmental and Transportation Efficiency Program: a partnership between the DOT, the State of Illinois, the City of Chicago, Metra, Amtrak, and the nation's freight to invest billions in passenger and rail freight infrastructure and other improvements in the Chicago region.
CSEDC	Chicago Southland Economic Development Corporation: seeks to organize and mobilize public and private resources that will result in the creation and expansion of businesses, providing economic growth, sustainable jobs and development in the Southland. The CSEDC sponsors the Green TIME Zone.
DCASE	Chicago Department of Cultural Affairs and Special Events.
DOT	Federal Department of Transportation.
GO TO 2040	Metropolitan Chicago's comprehensive regional plan (the first in more than 100 years), developed and now guided by CMAP.
Green TIME Zone	A program of the CSEDC to develop Southland's established rail infrastructure and manufacturing capacity to create desirable neighborhoods, good jobs, and environmental improvement. TIME = Transit, Intermodal facilities, Manufacturing, and Environment.
GDP	Gross domestic product.
GRP	Gross regional product.
iBio	Illinois Biotechnology Industry Organization: promotes public policy and delivers education and training programs to improve Illinois' ability to create, attract, and retain new technology businesses.
IMEC	Illinois Manufacturing Extension Center: a non-profit economic development organization providing general assistance to manufacturers in the state.
LISC	Local Initiatives Support Corporation: a national organization dedicated to revitalizing neighborhoods and improving quality of life. Its New Communities program, funded by the MacArthur Foundation, is active in 16 Chicago neighborhoods.

LQ	Location quotient: for industries in the Chicago region, the relationship between an industry's share of employment in the region's economy and its share in the national economy. An LQ of 1.0 means that industry's share in the Chicago region matches its share in the national economy; an LQ above 1.0 indicates regional specialization.
McPier	Metropolitan Pier and Exposition Authority.
Metra	The Northeast Illinois Commuter Rail System.
MSA	Metropolitan statistical area: the Chicago MSA, as defined by the U.S. Census Bureau, includes Cook, DeKalb, DuPage, Grundy, Kane, Kendall, Lake, McHenry, and Will counties in Illinois; Jasper, Lake, Newton, and Porter counties in Indiana, and Kenosha County in Wisconsin. Its population of 9.6 million (2009 estimate) makes it the third most populous MSA in the nation.
OECD	Organization for Economic Co-operation and Development: an international organization founded in 1947 to implement the Marshall Plan; committed to developing policies to promote economic well being among the people of the world.
RFID	Radio frequency identification: a multi-purpose technology used to track the position of packages or shipping containers via attached shipping tags that transmit radio waves to an electronic reader.
SMEs	Small and medium-sized enterprises.
Sustainable Industries	An initiative sponsored by the City of Chicago to identify better ways to streamline City services to manufacturers and to manage City industrial corridors.
T&L	Transportation and logistics
WBC	World Business Chicago

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